Future Shocks 2022

Addressing risks and building capabilities for Europe in a contested world

STUDY

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The coronavirus crisis has demonstrated not only that the European Union faces a variety of risks, and that those disparate risks are interlinked, but that the response to such challenges to the Union - even in areas in which the EU does not have explicit competence - is stronger with the Union and its Member States acting together. Russia’s war on Ukraine, which was launched while this study was being drafted, shows us not just the added value of concerted action by the Union but also the ability of EU institutions and Member States to find new and effective solutions to deal with major shocks.

This paper, the first in an annual series, seeks to assess the risks to, and capabilities and resilience of, the EU system. Building on a review of global risks, it considers in detail specific risks with the potential to harm Europe and its people. It then sets out options for policy responses which can ensure Europe is more able to address the dangers of such risks and minimise the potential damage. Among the options set out are those previously included in European Parliament resolutions, in positions from other EU institutions, and in policy papers from think tanks and stakeholders.
SUMMARY
This paper continues a series launched in spring 2020, which sought to identify means to strengthen the European Union’s long-term resilience in the context of recovery from the coronavirus crisis. The previous papers were: ‘An initial mapping of structural risks facing the EU’ (July 2020), which set out some 66 potential structural risks confronting the European Union in the aftermath of the coronavirus crisis; ‘Capabilities and gaps in the EU’s capacity to address structural risks’ (October 2020), which looked at those risks from the mapping which were considered as more immediate and significant, and considered ways in which the EU and Member States could address them, either with existing capabilities or through filling gaps in policies and instruments; and ‘Options to enhance the EU’s resilience to structural risks’ (April 2021), which examined in greater detail, in 25 of the fields presented in the previous papers, possible action by the EU and highlighted proposals from various quarters, including the European Parliament itself, and at potential or actual constraints that might hinder action in these fields. This latest paper first looks anew at 15 risks facing the European Union, in the changed context of a world coming out of the coronavirus crisis, but one in which a war has been launched just outside the Union’s borders. It then looks in greater detail at 11 policy responses the EU could take to address the risks outlined and to strengthen the Union’s resilience to them.

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Introduction

When risk becomes reality

Russia's brutal expansionism is a realisation of the worst fears of those who have been warning of the consequences of several years of increasing geopolitical tensions. With the benefit of hindsight, it is easy to draw a line from Russia's bombardment of Grozny, the destruction of Aleppo, and the invasion of Georgia in 2008, through the seizure of the Crimea in 2014 and Russian aggression in the Donbass, to the invasion of Ukraine in February 2022. Equally, one can draw a line from the increasing repression of political opposition within Russia, ranging from the assassination and imprisonment of opponents, and the capture or closing of independent media outlets, to the present draconian approach to any expression of anti-war sentiment.

The invasion has also cast well-known dimensions of risk analysis into sharp relief. One is the difficulty of translating alerts on imminent threats into action – before the threat is actually upon us. Another is the fact that the most serious risks have impacts far beyond a given region or a given sector. Just to consider the risks addressed in this volume, the invasion of Ukraine has already given rise to mass migration into the EU. It has reinforced the trend towards higher energy prices. It creates new supply chain risks, for example in the production of fertilisers. It may create further impetus for the fragmenting of the internet into unconnected domains. There may also be a positive consequence: surely there will be greater appreciation of the importance of democracy and democratic values, and a reaction against both tyranny and attempts by tyrants to subvert democratic elections.

This collection was designed before the invasion. It gives no satisfaction that the Russian aggression was the subject of one of the 15 ‘Risk’ chapters, and the need to strengthen European defence was one of the 11 ‘Policy Response’ chapters. Both chapters have now been reworked – along with others – in the light of the war and its consequences.

The implications of the war however go far beyond the scope of this present report, and are being addressed in detail in a range of other EPRS briefings. We have however chosen to maintain the original plan for this report, which considers risks around a 360° horizon, and relates them to the need to maintain and build governance capabilities within the EU. Even when dealing with the immediate impact of a long-heralded crisis, we must continue to keep an eye on the long term, and to consider other possible challenges – and opportunities.

Objectives

This publication – ‘Future Shocks 2022: Monitoring risks and addressing capabilities for Europe in a contested world’ – is the first edition of what will be an annual assessment by EPRS of the risks to, and capabilities and resilience of, the European Union system, in the face of the multiple challenges of today's contested world. It seeks to:

- provide up-to-date, objective and authoritative information about global risks – a 360° survey, based on risk literature from a broad range of sources;
- identify and analyse specific risks that have the potential to harm Europe and its people. As such this report fills a gap left by risk reports which focus on global risks. It builds on this work and extends it to the specific EU context; and
deepen the knowledge basis and to identify policy options for EU decision-makers to effectively address risks, redress gaps in executive governance capacity, and create opportunities for benefit (capability-building).

The paper includes areas where the EU has primary competence, but is not limited to such areas. The experience of the pandemic has shown that areas of primarily national competence can and indeed must benefit from analysis and discussion at the EU level. Although health is an area of limited EU competence, the pandemic demanded a massive response at the EU level, including the creation of new funding and new activities.

**Structure**

This paper is a continuation of the EPRS Risk and Capability mappings published in 2020 and 2021. It has three main parts.

- **The first part**, the introduction, begins with a consideration of risk and of related concepts such as risk aggregation and risk management. It then reviews a wide range of recent risk literature; their findings are categorised with a view to their relevance for the EU. The first part concludes with a consideration of the EU’s governance of emerging risks.
- **The second part** consists of a closer analysis of 15 risks relevant for Europe and its citizens, across a wide range of topics and sectors.
- **The third part** includes 11 contributions on different areas where the EU is building capacity to deal with emerging threats. These address EU capabilities to respond to threats, and identify options for new capabilities and new actions at EU level.

Figure 1 below illustrates the connections between the various risks covered in the study and the policy responses put forward for consideration by policy-makers. In most cases each of the different risks is addressed in more than one of the responses. Just as the risks are inter-connected so are the responses. Russia’s aggressive stance vis-à-vis its neighbours, and the EU and the West more broadly, has, with its war in Ukraine, moved from being a risk to a fact in the period this study was being drafted. The impact of the war and its consequences loom large in policy discussions across the EU’s competences at the present time. Therefore each of the policy responses addresses the consequences of the war, to a greater or lesser degree.
Figure 1: Interconnections between the risks (Part 2) and policy responses (Part 3) set out in this study

Risks

- Russia’s brutal expansionism
- Extreme weather events
- Very high energy prices
- Another major pandemic
- Escalating public debt risk
- Stalling economy
- Semiconductor supply chain disruption
- Growing democratic fragility
- Collapse of the internet
- Algorithms undermining political debate
- Deepening and pervasive social divisions
- EU spending capacity under threat
- New ‘China shock(s)’
- Slowdown of the Chinese economy
- Acute stress at EU borders

Policy responses

- Climate-proofing the EU
- Strengthening our energy security
- Promoting economic recovery and resilience
- Establishing greater strategic autonomy for European industry
- Consolidating strategic ties with democracies
- Building a healthier online environment for healthy democracies
- Safeguarding EU and global food security
- Strengthening European defence union
- Consolidating EU internal security
- Responding better to future pandemics
- Building a European social model for the 21st century
Understanding risk

Dictionary definitions of risk include 'a situation involving exposure to danger', 'the possibility of something bad happening' and 'something that creates or suggests a hazard'. Risk analysis needs to go further, to consider for example what is the subject of a risk. Many of the reports considered here focus on risks to industry and business, and not least on events that can lead to loss of value of an investment. As this report has an EU perspective, it takes a broader approach. It will consider risks to stability, security and prosperity, all of which are core concerns of the EU and its citizens.

There are more elaborate definitions of risk than those just mentioned. An example from specialist literature is 'uncertainty about and severity of the events and consequences (or outcomes) of an activity with respect to something that humans value'. This combines two distinct aspects that are often taken as criteria for estimating the seriousness of a risk: probability and impact. Understanding risk also involves understanding uncertainty, which may be defined as a situation in which something is not known, is in doubt or is dependent on chance.

Risk has many dimensions. These include possible benefits of risk; risk aggregation; risk management; trade-offs between risks; the issue of mitigation versus adaptation; the need to understand the causes of risk; and the need to communicate risk to a broader audience. The following will examine these aspects in order to clarify questions such as:

- is a zero risk policy a legitimate goal?
- what combinations of risks from different sectors are particularly dangerous (risk aggregation)? How can such aggregated risks be addressed in a multidisciplinary manner?
- where is there a possibility that action to reduce one identified risk could lead to an increase of another risk (trade-offs)?
- are the root causes of a given major risk well known and generally agreed, or are they obscure or a matter of dispute?
- are there measures that can mitigate several risks simultaneously?
- how can we move from risk mitigation and management to opening new opportunities for the EU?

When is risk a good thing?

Speaking of his career as a test pilot for the space programme, Chuck Yeager stated 'You don’t concentrate on risks. You concentrate on results. No risk is too great to prevent the necessary job from getting done.' André Gide wrote that 'man cannot discover new oceans unless he has the courage to lose sight of the shore.' There is a positive element in risk, summed up in the saying 'nothing ventured, nothing gained'. This should be kept in mind when communicating about risk. Zero risk is rarely achievable and is rarely suitable as a primary objective. On the contrary, it is often the case that the biggest risk is to do nothing.

Risk aggregation

Combinations of risks from different sectors can be particularly dangerous. As Shakespeare wrote, 'when sorrows come, they come not as single spies, but in battalions'. Several risks can 'mature' simultaneously. Specialist literature emphasises the importance of showing how individual risks interact with each other, in order to keep the larger picture in mind. To give one example, globalisation and increasing interconnectedness mean that the impact of a single event can spread rapidly around the world. Appreciation of risk aggregation has therefore become a key element of risk management. It also enhances the case for regular dialogue and contacts across organisational silos and across institutions.

A counterpart is the search for measures that can mitigate several risks simultaneously. The belief that a rising tide lifts all boats has often been invoked in relation to economic policy, and there are
good grounds for believing that a successful economic policy – one bringing greater prosperity – also helps towards greater security and stability. But it is far from easy to identify strategies that can mitigate the many different risks that cloud the economic horizon.

**Trade offs**

In some cases, action to reduce one risk can lead to the increase of another risk. This trade-off has long been known in healthcare. Surgery can involve the destruction of healthy tissue, but this is justified by the benefits of removing diseased tissue. A political equivalent would be the challenge of scaling back industries which contribute heavily to greenhouse gas emissions. The risk of unemployment will need to be mitigated by the creation of new jobs for individuals and regions affected by the green transition.

‘Old’ concerns about nuclear supply chains, nuclear accidents and nuclear waste are likely to gain traction if, for example, a significant share of funding for Europe’s green transition is devoted to increasing the production of nuclear energy.⁵

**Understanding the causes of risks**

It is easier to reach consensus on how to tackle a given risk when there is broad agreement on its root causes. Yet there are different kinds of risks. In some cases, causes can be easily established, and a single action or initiative may be sufficient to address them. More complicated risks call for a combination of measures. Then there are complex risks, where some causes are unclear; the remedies need to be multifaceted and may need to be adjusted over time. Finally, there are especially complex risks, where solutions need to be fine-tuned to the specific context and carefully monitored over time; a mistimed action can make the situation worse.

Where the causes of a complex risk are obscure, or a matter of dispute, it can be more difficult to muster support for a given set of countermeasures. As some of the most important challenges facing the EU are especially complex in character, there is a need both for a strong effort to understand causes, and also to develop a consensus around the findings of such analysis.

**The governance of risk**

In governance and public affairs, being in control is a desirable state of affairs. Public opinion responds badly to the appearance of loss of control. Managing risk is a legitimate concern of governance, but it can also be a sensitive and difficult topic.

**Mitigation versus adaptation**

There are differences of opinion about when a risk should be met with mitigation – efforts to reduce the risk – and when it should be met with adaptation – changes in how one arranges one’s own organisation. This is a particularly lively issue in relation to climate change. In this area, mitigation is about limiting the extent of climate change effects, notably by reducing greenhouse gas emissions. Adaptation is about reducing vulnerability to the expected effects of climate change. These two approaches involve different costs and benefits; many experts support strategies that include both.⁶

**Risk management**

Risk analysis and evaluation give a starting point. But the identification of potential hazards should not be an end in itself. It should feed into a risk management strategy.⁷ Risk management involves the identification and application of measures and policies to control or eliminate potential harms, based on judgements about the tolerability or otherwise of a given risk. For the present report, the risks to be managed are those that may harm the security, stability and prosperity of the EU.
A survey of recent risk literature

A good way to begin a survey on risks is to examine work that has already been done – to review existing literature. We do this in the following, and use the STEEP (Social, Technological, Environmental, Economic and Political) categorisation to compile a broad overview of possible threats and potential weaknesses in different domains. The emphasis throughout is on risks for Europe.

The following draws on a wide variety of risk reports published in 2020 and 2021. As well as the EPRS reports mentioned above, we draw on reports from major re/insurance companies, international think tanks and networks, and other private-sector entities.

The methodology of risk reports

The most common method used is to survey expert opinion. This is the approach for example of the World Economic Forum Global Risk Report and of the major re-insurance companies. In the case of the AXA Report, expert opinion is supplemented by an extensive opinion poll. An impressive amount of risk literature is explicitly dedicated to risks to industry and to business. These are not limited to market trends but include geopolitical risks ranging from political instability to policy changes around regulation or taxation.

Global Trends to 2040 by the US National Intelligence Council is an example of an analysis firmly centred on risks to a state. Climate risks are now the subject of extensive analysis, most notably by the IPCC. Law enforcement bodies including Europol have covered downside risks of digitalisation such as cybercrime.

One can expect that risk reports on public health will receive more attention in future than they did before the pandemic. The report of the Independent Panel on Pandemic Preparedness and Response (IPPPR) states:

... years of warnings of an inevitable pandemic threat were not acted on and there was inadequate funding and stress testing of preparedness, despite the increasing rate at which zoonotic diseases are emerging.\(^8\)

Reports specifically dedicated to the analysis of social and societal risks, beyond public health, are relatively rare. A valuable contribution towards closing this notable gap is the OECD’s Risks That Matter, which is based on a survey of 25,000 individuals spread over 25 countries. This finds that finds that ‘people are worried about keeping their jobs, paying the bills, and staying healthy’.\(^9\) A clear majority say government should be doing more to ensure their economic security, and many are willing to pay more in taxes for this purpose.

Most risk reports seek to prioritise between different risks. This commonly involves judgements on two dimensions: the likelihood that a given event will happen, and the size of the impact if it were to happen. A third dimension is the timescale: when is a given event likely to happen. A Probability/Impact matrix is often used, based on survey data (see below). This is a visual representation which places risks in relation to each other and makes it easy to see those which are considered to be most likely and most impactful.
Mapping global risks on to the European context

This section will summarise a broad range of risks identified in recent literature, using the STEEP categorisation as an organising principle. It will flag in particular those risks which are analysed in greater detail in Part Two of this report.

There is a broad consensus in the reports considered that the pandemic is the greatest present risk, with climate and environment the next most important area. The reports were drafted before the Russian invasion of Ukraine, but they did identify geopolitical instability as a major risk. Cybersecurity is a key concern in relation to digitalisation, with implications both for business continuity and for democratic stability. Among macroeconomic issues, medium-term risks concern price instability, commodity shocks and debt crises. Societal risks include increasing discontent and the erosion of social cohesion, driven by loss of livelihoods; this in turn can lead to political instability and democratic backlash, further impacting society’s ability to respond to challenges.

Political and security risks

The reports considered flagged in some detail the problem of increasing Great Power rivalry, and drew attention to the risks of continually increasing geopolitical tensions. The Russian invasion of Ukraine means these risks have become reality.

An example of a geopolitical risk would be the continued rise of China, which may also increase the risk of a China-Taiwan conflict. This is a well-known concern, features frequently discussed as an aspect of global power rivalry and of US-China relations.10

In this context, the risk of deteriorating relations between the EU and China remains significant. Many reports predict a gradual downturn in the relationship, as tensions have increased since the end of 2020 and economic sanctions were imposed by both sides.11 If tensions continue to rise, the risk will have a widespread impact on Europe’s economy and green transition, as China is one of the biggest EU trading partners.12

If a further increase in Chinese power carries potential risks for Europe, so does the possibility of economic disruption in China.13 There is a case for careful assessment of the balance of risk and opportunity for Europe both of a successful China and of a China beset by economic turmoil.

Migration risks are mentioned by the World Economic Forum and others. The EU dimension of this includes the risk of greater pressure on EU external borders, on asylum schemes, and on migration policy generally.14 A linked issue is the risk that certain countries are weaponising migration, trade and energy to seek leverage in their relations with the EU.15

As regards domestic political affairs, the risk of democratic backsliding is often mentioned in the selected literature.16 Concerns about democracy are one of the four megatrends included in the Commission’s recent foresight report, as are changes in global order. These can both be regarded as political risks, one internal and one external.

Societal risks

Public health, the theatre in which the coronavirus pandemic is playing out, is of course a matter for the whole of society. The strain created by the pandemic has heightened existing megatrends. It has accelerated digitalisation, intensified economic downturns and amplified social unrest.17 The economic fallout of the pandemic has fuelled old and new geopolitical tensions.18 While cooperation is crucial for the post-pandemic recovery, interstate relations continue to deteriorate. This creates short-term threats both of interstate conflicts and of contests over resources.19 At national level, the health crisis has accentuated political instability and civil unrest; this combination is seen as a key challenge for the coming years.20 The coronavirus pandemic may give rise to a full
geopolitical crisis; its continuing economic and political effects could reshape the global and European landscape.21

Some reports investigate the risk factors behind the coronavirus pandemic, to assess their potential to cause new epidemics in future (see Risk 4).22

An OECD 2020 survey of 25,000 people in 25 countries set the impact of Covid-19 in sharp relief. Nearly half of households experienced some form of job disruption during the pandemic. One third faced financial difficulties, and 11.8% reported that a household member lost a job or a business. Only one in four considered that they got their fair share of benefits relative to their taxes and social contributions. Seven in ten supported greater spending on public health services. There is notable support for redistributive policies; 62.2% favoured more government action to reduce income inequality, through taxes and social benefits.23

Several reports highlight the risk of societal fragmentation and civil unrest. This is often in connection with the effects of the coronavirus health crisis and of the global economic downturn.24 The World Economic Forum centres its analysis on ‘the risks and consequences of widening inequalities and societal fragmentation’.25 The pandemic brought new disparities in health outcomes and workplace opportunities, and has added even greater strain to safety nets. Failure to act on inequalities may in turn make it harder to act on climate change, for example.

To improve social cohesion, the IMF recommends investment in social protection, education and health. 'Investing in education, healthcare, and early childhood development and strengthening social safety nets financed through improved tax capacity and higher progressivity, can strengthen lifetime opportunities, improve trust, and contribute to more social cohesion.'26 IMF research also suggests that increased taxation on the wealthiest companies and individuals – a solidarity surcharge – would be appropriate in the near term.27

The IMF points out the pandemic has worsened inequalities.28 The impact of the crisis pushed an estimated 97 million people into poverty in 2020. By contrast, the wealth of the world’s billionaires reportedly increased by 54%, as stock markets reached record levels.29 According to the IMF, inequalities of wealth, income and access to basic services such as healthcare and education pose risks both to the functioning of society and to macroeconomic stability. It adds that additional revenues will be needed to finance critical policies and to foster inclusive growth. The World Economic Forum notes another dimension of growing inequality: small and medium-sized enterprises have been hit much worse than large enterprises in the pandemic.30

Risk reports from the policing and security sectors continue to identify organised crime as a serious threat to the internal security of the EU. Their activities range from the drug trade to cybercrime, and from migrant smuggling and human trafficking to transport of dangerous and illicit waste. The present pandemic context and the potential for serious social and economic fallout could facilitate the expansion of organised crime in Europe. Organised criminal elements have already adapted to the pandemic environment by adjusting illegal products, their operational methods and narratives to the Covid-19 context.31

Corruption remains a significant risk in the coming years. Transparency International’s Global Corruption Barometer finds that almost one-third of the respondents consider that corruption in their country was getting worse, and almost half feel that their government is not effectively addressing the issue. An estimated 30% of the people use corrupt means (such as bribes and abuse of personal connections) to access public services. There is widespread concern about ties between business and politics: over 50% of respondents believe their national governments are run by private interests.32

Technological risks
Recent risk reports underline the increased danger of cyber-threats. Cyber-attacks are on the rise, and cybercrime is estimated to cause businesses annual losses of US$5 trillion.33 Pandemic-induced
digitalisation may create new vulnerabilities. Increasing reliance on technology exposes both private and public sectors to cyber-threats. Experts have low confidence in the readiness of governments to respond to such risks.  

A related risk is **cyber-attacks**. Many reports classify the risk of cybersecurity disruptions and the new technological arms race – the competition to acquire new AI capabilities – as some of the greatest present risks in Europe. Global ransomware, attacks on energy infrastructure, supply chains, and failure of the cloud have been identified as the most pressing risks for businesses in the years to come. In addition, state-sponsored groups are contiguously developing their capabilities for disruptive operations. It is predicted that state-backed actors will further pursue their strategic objectives through cyber operations for intelligence gathering, intellectual property theft, and operational environment preparations. Another dimension of cybersecurity is the problem of government overreach, for example through abusive surveillance of political opponents or indeed the citizenship generally.

A **collapse of the internet**, or of major tech providers is not a new possibility (see Risk 9). Recent web outages suggest that internet infrastructure is increasingly centralised, which decreases its resilience and increases the danger of a major network collapse. The Canadian Society of Actuaries identifies this as an issue of concern. In one scenario, a problem arising at a single infrastructure provider could lead to the collapse of entire critical segments across the globe.

Digital hyper-connectivity is identified as one of four megatrends by the latest Commission foresight report. Other aspects of technological change also raise concerns. Some reports emphasise the risk of **algorithms destabilising democratic political debate** (see Risk 10). An example is the flourishing of disinformation about vaccines, which adds a new dimension to the discontent wrought by the impact of the coronavirus pandemic on employment and incomes. When social media platforms amplify misinformation, whether through sins of commission or of omission, they heighten the risk of polarisation and of societal conflict.

The longstanding concern about the risk that digitalisation would replace more jobs than it created has developed into a recognition that many jobs will change significantly, and that reskilling is an essential part of adaptation. An associated issue is whether digitalisation will bring productivity gains. To date, such gains have lagged behind expectations. Suggested remedies include improvements in **skills** and in connection speeds. An OECD study finds that monopolisation of platform markets is associated with weaker productivity gains.

**Economic risks**

Several reports classify the **failure of post-pandemic recovery** as a major risk with potential long-run effects. This is associated with the risk of **failure to secure adequate financing** for public services and for government and administration. This is directly relevant to the EU, especially if current limits on own resources are maintained.

The emerging **insolvency wave** is identified among the top ten short- and medium-term risks in some reports. Economic outlooks devote much space to this issue. A counterbalancing risk of excessive and over-hasty reduction of public spending levels has also been identified. Among risk managers, significantly more have lower expectations of the global economy compared to before the pandemic.

Some reports mention the **risk of rising energy costs** as a facet of the economic instability resulting from the coronavirus pandemic. The link between heightened geopolitical instability and the rise in energy prices is also explored.

The **energy transition** is widely seen as a playground for global rivalry. There is a high risk that competition and lack of coordination will dominate the global energy transition. This will form part of the background to the EU’s attempts to develop a carbon border adjustment mechanism.
The **disruption of supply chains** is a top global risk in some reports. The related issue of risks related to clean energy supply chains is also much discussed. The energy transition is expected to be strongly affected by competition and insufficient coordination.50

**Environmental risks**

In most reports, **climate change** is the next most important global risk. In Europe, climate change is identified as the greatest challenge for the coming years; it is identified as one of four megatrends in the Commission’s latest foresight report. This area too has a broad impact – on human health and well-being, on the environment, and on economies across the world – and some effects are irreversible.51 The physical risks it poses are among the most pressing concerns both for the public and for experts.52 Authoritative assessments predict a rise in global temperature of 1.5°C or more over the next two decades.53 Extreme weather events, wildfires, floods and droughts will become more frequent.54 Rising sea levels will put at risk both human livelihoods and ecological systems.55 Climate change will have severe consequences for individuals and communities, the environment, food and water security, and development.56

**Extreme climate events** feature frequently in the literature, often addressed in connection with natural disasters. Some reports note that the link between climate change and the incidence of extreme natural events is difficult to prove; it is contested by some scholars. Associated risks include failure of climate action, human-made environmental damage, and shortages of natural resources.

The link between climate change, **biodiversity loss and possible impacts on human health** is a particular focus, arising out of continuing discussion on the origins of the coronavirus pandemic.57

*The Lancet* has drawn attention to the **risks to human health from global warming**.58

A report by the International Military Council on Climate and Security (IMCCS) draws attention to catastrophic **security implications** arising from plausible scenarios of **climate change**.59

**Neglected issues/Blind spots**

Russia's invasion of Ukraine has brought a sharp focus on certain risks that have not been given high priority in recent years, to judge by the reports summarised above. One of these is the risk of escalation towards **nuclear warfare**. To its credit, the *Global Catastrophic Risks Report* included this as an example of an ‘old’ risk that still deserves attention. Another re-emerging risk is that of global food insecurity, due both to the likely loss of Ukraine’s grain exports and to the disruption of the production and supply of fertilisers worldwide.60

A 2020 report by the *Canadian Society of Actuaries* includes a list of undervalued risks, over a wide spectrum of areas.61 Environmental risks include loss of freshwater services, severe weather, tropical storms and earthquakes. International security concerns include failed states, wars, and weapons of mass destruction. Economic risks which may be undervalued include currency shock, asset price collapse, financial volatility, and Chinese destabilisation. Other risks relate to liability regimes and regulatory frameworks, and transnational crime and corruption.

The *World Economic Forum* makes the point that several developments have a negative impact especially on youth, and create a risk of disenchantment and exclusion.62 The *Global Catastrophic Risks Report* also points to the potential harms of an AI weapons race, which could lead ineffective governance and a failure to address safety concerns.63

**Policy responses to present and emerging risks**

This report includes eleven chapters on policy responses to the risks ahead, each addressing a particular sector or theme. They address both existing governance capacity and options for enhancing capabilities within the EU.
There are a few common threads across the different sectors. One is the potential dividend of improved cooperation, coordination and integration of services and activities across the EU, and across national borders. The Covid-19 pandemic is a powerful example of the importance of such collaboration, allowing resources to be quickly moved to areas most at risk, across national borders when necessary. The rapid development of vaccines is testimony to the benefits of international research cooperation.

A second thread is the need for resources and funding. Climate-proofing will involve huge investments. New revenue sources will be needed to pave the way to sustainable economic recovery, to maintain the European social model and to ensure health systems meet future needs. Investment on a large scale is critical for mitigating the impact of climate change and for developing of Europe’s industrial base. For obvious reasons, security and defence expenditure is likely to increase.

A third thread is the development of a stronger strategic edge within and across different sectors. Examples include the importance of strategic partnerships to secure competitiveness in high technology industry, the need for strategic recalibration in security and defence, and the consolidation of partnerships among democracies to protect and renew multilateralism.

**Estimating probability and impact of selected risks**

As mentioned above, Part Two of this study addresses a selection of 15 risks in greater detail. To support our analysis, we conducted an internal survey to estimate the likelihood and the impact of these risks. Participants were asked to rate the impact and the probability of each risk as either low, medium, or high, for both the short term (2022/2023) and the medium term (2030). The survey was taken in the wake of two seminars in which future risks were discussed. It is important to note that the survey was concluded before the Russian invasion of Ukraine. The results represent solely the opinions of respondents.

*Figure 2: Probability/Impact matrix for fifteen selected risks (2022/2023)*
Figure 2 shows a Probability/Impact matrix for the 15 selected risks in the short term (2022/2023). Figure 3 is a Probability/Impact matrix for the medium term (2030). The risks spread across the STEEP categories, and are colour-coded accordingly. In both the short and medium term, energy prices, expansionist Russia and social divisions feature as high probability and high impact risks. The risk of extreme weather is deemed to become greater over time. Risks arising from algorithms, Chinese economic slowdown and EU budget stress are considered to be more likely in the medium term than in the short term.

Figure 3: Probability/Impact matrix for fifteen selected risks (2030)

Figure 4 ranks the 15 risks by estimated likelihood in 2023, with the 2030 estimate below for comparison. Figure 5 ranks the selected risks by estimated impact in 2023, again with the 2030 estimate for comparison. These figures show that perceptions on probability of a threat can vary greatly from perceptions on its impact. A high probability does not necessarily mean a high impact, and vice versa. Curiously, the four risks ranked most probable in the short term (energy price, China political risk, Russia risk, semiconductor supply risk) are the only four that are deemed less probable in the medium term, albeit only marginally. An optimistic explanation for this could be confidence that current work to increase resilience will mitigate the likelihood of these risks in the future. A less optimistic interpretation would be that respondents believe they will have come to pass before 2030.
**Figure 4: Selected risks ranked by estimated probability in 2023**

The 2030 estimate is included for comparison.

**Figure 5: Selected risks ranked by estimated impact in 2023**

The 2030 estimate is included for comparison.
Outlook: Adapting governance capacity to new demands

A key insight from this literature review is the need to improve communication around risk and risk management. In the pandemic, the tendency to emphasise the positive had to be balanced against the need to accurately communicate real risks to health risks. In some cases, it proved difficult for public authorities to admit uncertainties and limits to their knowledge. In other cases, the political and public health authorities worked together to deliver clear messages on restrictions and their justification and contributed to greater public trust and greater compliance with rules and recommendations.

The recent past shows the importance of health system capacity and of financial assistance to the vulnerable. A higher number of hospital beds per capita is associated with lower mortality rates during the pandemic. \(^{64}\) In the recovery, executive action, both at national and at EU level, will be critical in many ways. Many people expect to have to do more with less in the coming years;\(^ {65}\) public administration may well face the same dilemma.

The risk reports as a whole suggest some general lessons for governance. One is that different policy areas are interconnected and interdependent. This can be illustrated by cycling through some of the risks addressed in this report. The increase in extreme weather events can include extreme cold snaps, which raise demand for heating, leading to spikes in energy prices. Higher energy prices can hamper economy recovery. At the same time, algorithms may drive political divisions; combined with economic troubles, this can produce greater social polarisation. In extreme cases this could lead to the failure of a Western democracy, which could well damage the international effort to mitigate climate change. Interconnectedness of risks strengthens the case for cross-sectoral strategies and policy packages.

A second lesson is that effective governance needs holistic and strategic analytical capacity. Risk monitoring should be conducted as part of a broader effort to develop strategic foresight and anticipatory governance. This is even more important when we are faced with a vicious circle: pandemic, climate and cyber threats, left unattended, exacerbate social unrest, political fragmentation and geopolitical tensions. These in turn weaken our capacity to act effectively against these and other threats. We thus arrive at a point where, as UN Secretary General Antonio Guterres put it, ‘we have a surplus of multilateral challenges and a deficit of multilateral solutions’.\(^ {66}\)

The threats faced by the EU are faced by several other actors. This points to the need for international collaboration, in particular between the EU and international organisations. The case for working together at a global scale to limit the spread of infection is strong, and cooperation on the development of vaccines, for example, has opened new opportunities. Risks can pave the way for opportunities, if there is the courage to seek new horizons. As Seneca put it, ‘it is not because things are difficult that we dare not venture. It is because we dare not venture that they are difficult.’

The Russian invasion of Ukraine is the latest in a series of crises that have marked the present decade. Others were the coronavirus pandemic and the economic downturn that resulted from efforts to contain the spread of infection. Each of these crises is transnational in character; even if they start in a specific country or region, their impact and their consequences go far beyond national borders. It follows that capacity for responses at a transnational level is more and more an essential element both of risk management and of anticipatory governance.

In the European context, the EU adds crucial transnational capacity that can be mobilised to prepare for the most intractable risks ahead. This report sketches a wide range of serious risks that need to be carefully negotiated. It is in everyone’s interest that the capacities available through the structures and processes of the EU are fully utilised.
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Key risks to Europe for 2022 and beyond
Russia's brutal expansionism

WHAT? – State of play

The war on Ukraine is the latest manifestation of Russia's revisionist policy over the past decade. Russia has increasingly been using hybrid warfare tactics to assert its international position and gain 'strategic leverage'. Its conception of hybrid war includes both 'activities below the level of conventional conflict' and 'conventional conflict' means. Russia has used both warfare tactics (non-conventional and conventional) in conflicts in the EU's neighbourhood, in particular in Syria, Libya, Africa and in Ukraine. Prior to the ongoing war, Russia seized and illegally annexed Crimea in 2014 and carried on a war in Donbass, recognising unilaterally, a couple of days before the invasion of Ukraine, the independence of the self-proclaimed independent republics of Luhansk and Donetsk.

The illegal annexation of Crimea in 2014 led to an abrupt halt in high-level political dialogue, with the G8 returning to its earlier G7 format, while no EU-Russia summit has been organised since. The European Council agreed to impose sanctions, a decision regularly reconfirmed since. Early in 2021 already, the massing of Russian troops on Ukraine's border caused 'concern' in the EU and in the North Atlantic Treaty Organization (NATO), while by the end of 2021, in parallel to a second massing of troops, political dialogue reached a new low as Russia 'suspended its diplomatic mission to NATO' and asked the alliance to 'shut its liaison office in Moscow'.

More recently, in response to the 'premeditated and unprovoked' attack on Ukraine, the EU, in unity and together with like-minded partners worldwide, in particular the US, agreed on unprecedented sanctions and pledged support to Ukraine, including €1 billion assistance to the armed forces under the European Peace Facility. In parallel, several countries operated massive shifts in their Russia policies, as was the case with Germany, which broke away from its engagement policy, halted Nord Stream 2, decided to increase defence spending and accepted to send weaponry to Ukraine.

Before the invasion of Ukraine, in December 2021, Russia addressed so-called requests for 'security guarantees' to both the United States (US) and NATO while looking for closer ties with China. Russia's requests comprised inter alia a commitment from NATO to put an end to its open door policy, including a promise that Ukraine would not join the alliance. It has also asked for a guarantee that NATO would abandon its current efforts to strengthen its presence on the eastern flank, while withdrawing and limiting its presence for those countries that were members of the alliance prior to 1997 (personnel and weaponry) to the then locations and levels. This attempt to revert to a world based on spheres of influence and to deny certain countries the ability to freely choose their alliances was rejected by the EU, NATO and the US, while also exerting the principle of 'nothing about you, without you' as a basis for a united position towards Russia. NATO's political unity was strengthened as well as its operational output, mostly visible through the reinforcement of the eastern flank.

Geopolitical tensions in the EU's neighbourhood offered Russia an opportunity to instrumentalise migration to a higher degree through disinformation campaigns aimed at undermining democracy in the EU. In the autumn of 2021, Belarus artificially provoked an influx of refugees into the EU, prompting Polish Prime Minister Mateusz Morawiecki to state that Russia 'masterminded' the plan. European Commission President Ursula von der Leyen pointed to the 'hybrid' nature of the move, stressing that it was not a 'migration crisis'. Furthermore, some of the protracted conflicts in the EU's neighbourhood have the potential to heat up, as was the case with Nagorno-Karabakh in 2020, and where tensions are on the rise again at the time of writing. Further integration of Belarus into Russia, or permanent military presence of Russian troops there, could also alter the EU's security environment some more.

Energy is a commodity that Russia has already chosen to use as an economic and geopolitical weapon, through an assertive supply and price policy towards the EU and its neighbourhood, as was
recently the case in Moldova. Russia was in 2019 the EU’s main external supplier of both natural gas (38%) and crude oil (27%), and some EU Member States remained highly dependent on Russian energy in their imports (see Figure 6). Russia’s economy is heavily dependent on energy exports, most of which are directed towards EU countries. Following Russia’s invasion of Ukraine, the EU decided to cut out its dependency on Russian fossil fuels, and the Commission is to present by mid-May 2022 a phasing-out plan by 2027. By supporting the twin transition, which would include more home-grown renewables and a higher of nuclear power, the EU could further reduce its energy dependency on fossil fuels. However, it will have to assess the impact of nuclear power on raw material imports, such as uranium, for which Russia is currently the EU’s second biggest supplier, being outranked recently by Niger (the difference in quantities supplied is negligible, less than 1%).

**Figure 6 – EU imports of natural gas and crude oil from Russia (share of total imports)**

Data source: Eurostat (NRG_TI_GAS and NRG_TI_OIL).

Cyber activities, ranging from espionage and surveillance, to hacking and social media campaigns, are a key component of Russia’s hybrid approach to warfare. Hybrid behaviour has increasingly been used against the EU more broadly to undermine democracy, spread disinformation, interfere with electoral processes, or disrupt critical infrastructure and essential services such as health services.

**SO WHAT? – Risk factors involved**

Geopolitics is back: Russia’s war on Ukraine and its assertive behaviour in the past decade have confirmed this. Other global or regional powers are also increasingly seeking to maximise their positions on the international scene, putting the EU at risk of being caught in between unless it chooses to step up its game and use its 'soft power tools' more assertively while also building up 'hard power tools', thus moving from 'soft' to 'smart power'.

The risk of (non-intended) full-scale conflict is growing as Russia multiplies conflicts in the EU’s neighbourhood. NATO remains the primary collective defence and deterrence tool for its 30 member countries, 21 of which are also members of the EU. By boosting capabilities development projects and strengthening the European defence market and industry, the EU could contribute to reducing the risk of obsolescence in military capabilities, and support the development of the next generation of capabilities so as to help articulate a purposeful European pillar within NATO. Stronger security and defence capacities would allow the EU to define itself as a global power and an influential player in the geopolitical competition in its own neighbourhood. A key commitment undertaken under the Strategic Compass, the EU long-term strategic vision, is to bolster the development of capabilities. To implement the Strategic Compass, vision needs to be met by means. New financial solutions are to be outlined by mid-2023, including a better use of the EU budget,
which still presents an untapped potential, as underlined by European Parliament President, Roberta Metsola, when addressing EU leaders in Versailles and Brussels.

Energy price volatility and supply shortages represent a risk for the EU economy, society and democracy. In the short to medium term, mitigation measures, such as direct support to households and industry, may dampen shocks induced by energy price spikes. These need to be followed by medium- to longer-term measures, such as supply diversification conducted in parallel to phasing out dependency on Russia by 2027. Efforts to accelerate the twin transition should intensify, enabling a boost to home-grown energies and a reduction in the EU's overall energy vulnerability. EU society and democracy will continue to be at risk as Russia continues its cyber and hybrid activities, including through the instrumentalisation of migration, the funding of anti-democratic political parties and organisations, and disinformation campaigns. To counter these risks, the EU needs to enhance its resilience by strengthening both its economy and its ability to fight disinformation. Investing in innovation and making better use of civilian technology in defence is key to enhancing technological sovereignty, reducing strategic dependencies and preserving intellectual property in the EU.

**WHAT NEXT? – Impact on the EU**

Russia's war on Ukraine has led to the adoption, until the time of writing, of four massive packages of sanctions, representing the EU's immediate reaction to the war. EU leaders have also adopted the Versailles declaration, which provides long-term guidelines aimed at strengthening European sovereignty by addressing existing vulnerabilities and cutting dependencies, notably in three priority policy areas: the economy, energy security, and security and defence.

The Strategic Compass, endorsed by the European Council in March 2022, reaffirmed the EU's commitment to the principle of territorial integrity of states; recognised that Russia's hybrid activities affected the security of the EU and of its neighbourhood; pointed to 'the erosion of the arms control architecture in Europe'; and stressed that Russia's 'aggressive and revisionist actions', conducted closely with Belarus, 'severely and directly threaten the European security order and the security of European citizens'. It pointed to the strategic requirement of enhancing the mobility of military personnel and equipment across the continent; counter disinformation and interference originating in Russia, but not only; and deepen dialogue and cooperation with NATO.

Some elements of the EU Global Strategy, adopted in 2016, such as the EU's 'ambition of strategic autonomy' and 'a consistent and united approach [that] must remain the cornerstone of EU policy towards Russia' remain relevant. Other elements however, such as 'interdependency' and 'engagement' with Russia, are in urgent need of a review in light of recent developments and the more robust language used in the Strategic Compass. The same is valid for the 2021 joint communication on EU-Russia relations, which recommended simultaneously to 'push back, constrain and engage' Russia. Some of the five principles that have defined in EU's Russia policy since 2016 are still relevant and could be reinforced, namely: 1) closer cooperation with Eastern Neighbourhood and central Asian countries; 2) strengthened EU resilience with respect to energy and hybrid threats; and 3) support for civil society in Russia. The principle of engaging with Russia on matters of mutual interest does not reflect the new realities. The implementation in full of the Minsk Agreements prior to the lifting of economic sanctions represented the conditionality introduced by the European Council following to the illegal annexation of Crimea; however, in due time, new or additional conditionalities might be needed.

EU action to enhance resilience has thus far included the adoption of a sanctions regime 'against the proliferation and use of chemical weapons', the EU Magnitsky Act and a joint framework on countering hybrid threats. The EU has also adopted an action plan against disinformation while boosting its strategic communication to counter disinformation originating in Russia on a fact-based basis. A cyber-defence policy framework adopted by Council in 2018 was followed by a cyber-security strategy in December 2020. All these areas of action are to be enhanced as the Strategic
Compass begins to be implemented. The EU has also stepped up cooperation with NATO, including on countering disinformation and hybrid threats; and the EU-NATO declaration, now in preparation, will most probably call to strengthen cooperation further.

The twin transition is at the core of the EU’s action and offers an opportunity to reduce energy dependency on fossil fuels. Furthermore, Russia’s war on Ukraine has shown that reducing energy dependency is not a long-term luxury but an urgent necessity for the EU, and that an energy policy conducted on economic considerations alone might prove perilous at a time when geopolitics is back and the architecture of the European security questioned. Working swiftly with partners, in particular the US, the European Commission successfully secured supplies from alternative sources, which, as stated by President von der Leyen, led to ‘record deliveries of LNG [liquefied natural gas]’ in January 2022. Furthermore, the Three Seas Initiative cross-border energy connectivity project has brought together 12 EU Member States in central Europe and on the NATO’s eastern flank in an attempt to diversify energy supply sources. In addition to diversification, a better integration of the single market in energy, gas storage targets, joint procurement and greater interconnection capacity between Member States would further reduce energy risks, as would greater investment in research and innovation on clean technologies.

WHAT IF? – Three possible scenarios

The nexus of two driving forces – appetite for cooperation or conflict, and democratisation or further reclusion into authoritarianism – offers different perspectives on Russia’s possible behaviour up to 2030. Three scenarios, shown in Figure 7, are developed below. A fourth scenario, based on conflict in a context in which Russia embraces a path to democratisation, is non-plausible and therefore not developed here. Nevertheless, rapid developments under the different scenarios cannot be discarded at the time of writing.

**Figure 7 – Scenarios on Russia’s possible behaviour up to 2030**

![Figure 7](https://example.com/figure7.png)

Source: EPRS.

**Scenario 1: Perilous**

This scenario is unfolding as Russia conducts its war on Ukraine, where there is use of conventional forces, a threat of recourse to nuclear weapons and a risk of contagion, which should neither be maximised nor minimised. Russia might look to heat up protracted conflicts, such as Transnistria, or
could be confronted – much to its disliking – with the heating up of protracted conflicts, such as Nagorno Karabakh, where it would not be able to intervene as its focus would remain on Ukraine. In parallel, Russia will, most probably, continue to further multiply and intensify its cyber and hybrid activities against the EU and NATO. Its attempts to expand its military presence in the Black Sea, mounting pressure on NATO's eastern flank, would most probably be pushed back for the duration of the war in Ukraine as Turkey applies the Montreux Convention on the regime of the straits. The massive sanctions imposed by the EU, the US and their allies worldwide would crumble Russia's economy, which would in turn become more and more centralised, as the regime would further seclude towards authoritarianism. The pivot to China would allow Russia to pursue its bellicosity in exchange of increased economic dependency, which could place Russia in a 'vassal state' position. Domestically, Russia would continue to severely repress civil society and political opponents. The EU would continue to cope with the massive influx of refugees from Ukraine, finalising the pending reforms in its migration policy. It would also grasp the opportunity to reduce dependencies in key strategic areas and strengthen its energy as well as its defence and security policies. Depending on the outcome of the war in Ukraine –and on multiple domestic factors, including an increasingly precarious economic situation, which could in the long run trigger massive public discontent – Russia would either navigate again towards this 'Perilous' scenario, threatening with yet another full-scale (non-)conventional war against the same or another neighbour, or move towards the 'frozen' or the 'cooperative' scenarios below.

**Scenario 2: Frozen**

This scenario takes place after the war in Ukraine has ended, at a time when an increasingly authoritarian Russia continues with (and multiplies) its cyber and hybrid activities, including espionage, in an attempt to pressure, destabilise and endanger the EU. Russia would also most probably intensify its hybrid war in the EU's neighbourhood, trying to heat up protracted conflicts. Its push for a more integrated 'union state' with Belarus would continue, as Russia will not only multiply the frequency of the Zapad military exercise (joint Russian-Belarussian military exercises currently occurring every four years), but could also retain permanent military presence in the country. The 2024 presidential elections would most probably confirm the current political leadership, and hence, its course of action, while a subsequent round of elections would only take place in 2030. Crushing on civil society and political opponents would intensify as the regime would seclude further towards authoritarianism. The nationalist rhetoric would increase, surfing on an idealisation of a 'glorious' soviet and/or imperial past. Orthodoxy would, similarly to the 19th century, be used increasingly as a geopolitical weapon, with the aim of dividing and destabilising parts of the orthodox world, in particular the western Balkans. Russia may continue to instrumentalise migration for political purposes, but could no longer use energy as a weapon, since the EU will have progressively phased out its dependency, multiplied its supply sources and diversified its energy mix. In economic terms, Russia would continue its pivot towards a centralised economy, which would be highly dependent on key sectors, such as energy exports to China. International justice would progress in investigating war crimes committed in Ukraine, Georgia and Syria. Russia, which would continue to violate international law, will remain an international pariah, in or outside of the UN.

The EU will phase out its dependency on Russian fossil fuels, while also addressing other dependencies, such as raw materials. It will continue to push back but also to contain Russia internationally as the country would continue to violate international law. High-level political dialogue would remain frozen. Engagement would not be possible, while communication would be possible at the technical level on punctual issues related to, for example, counter-terrorism. Figure 8 assesses the risk impact of this scenario on four indicators – wealth, society, twin transition and the EU in the world. Materialisation of the other two scenarios, described below, would either reduce the overall risk impact to minor ('cooperative' scenario) or, conversely, increase it to major ('perilous' scenario).
**Scenario 3: Cooperative**

Under this scenario, Russia reverses course, moving towards de-escalation and cooperation, and giving up on its hybrid activities targeting the EU and its neighbourhood. Russia goes through a severe economic crisis as a result of the war in Ukraine – one that endangers the regime’s survival. This may trigger either a more aggressive foreign policy stance if the regime moves towards increased authoritarianism or a less assertive approach as the regime opens to reform or even democratises under domestic pressure. The EU diversifies its gas supply and its energy mix, privileging both home-grown renewables and nuclear power as it moves towards carbon neutrality by 2050. It also ensures energy connectivity with countries in its neighbourhood, in particular Ukraine and Moldova, reducing Russia’s leeway. Russia’s attempt to compensate for losses on the EU energy market by increasing its share of the Chinese market is unsuccessful amid a Chinese economic slowdown from the impact of secondary sanctions. Consequently, Russia agrees to change course in exchange for the lifting of economic sanctions; recognises Ukraine’s territorial integrity within its internationally recognised borders; abandons its revisionist policy; cooperates with the international justice as war crimes perpetrated in Ukraine are investigated; and calls for the re-opening of the high-level political dialogue with the EU, reintegration in the G8, and the normalisation of its position in the UN.

**References**


Extreme weather events

WHAT? – State of play

Extreme weather events, including deadly floods in Germany and Belgium, and wildfires in Greece, Italy and France, shook Europe in 2021. Yet such events can no longer be considered rarities, as the frequency and intensity of extreme weather events has been increasing over recent decades. Scientists have linked these increases to the human-induced global warming. Looking at the past 20-year period, the average global surface temperature has been $1^\circ C$ above the 1850-1900 average. According to the latest estimates, this figure will reach 1.5 °C before 2040. By 2100, with full implementation of existing commitments following the climate conference in Glasgow, a 2.4 °C increase can be expected.

As the likelihood of extreme weather events increases, the risks are exacerbated by the events' unpredictability, making the decision-making process around adaptation more complicated than for more predictable climate impacts, such as sea level rise. Weather events relate to temperature, precipitation (rain or snow), and wind, and can be characterised by their intensity (e.g. record temperature or rainfall), frequency (e.g. more frequent heatwaves or storms), duration (e.g. droughts lasting many years), and variability (high temperatures or frosts occurring at unusual times of the year). Beyond wildfires and flooding events, violent storms or hurricanes and periods of drought and extreme heatwaves are Europe's main extreme weather events.

SO WHAT? – Risk factors involved

The impact of extreme weather events varies depending on what happens and where, with disruptions to society generally lesser if the event occurs outside populated areas. However, when heatwaves cover major parts of the continent, or floods and landslides occur in cities, the costs in terms of both fatalities and property damage increases exponentially.

Heatwaves are considered the deadliest weather events. The 2003 heatwave accounted for over 90% of all weather-, climate- and water-related fatalities in the 1970-2019 period for Germany, Italy and Spain. Of the total 91 455 deaths in the EU-28 caused by weather and geophysical disaster between 1980 and 2017, 85% were linked to heatwaves. When it comes to financial losses, World Meteorological Organization data for Region VI dating back to 1970 show that storms and floods – the most prevalent type of extreme weather in the EU – are the most costly. The total cost of the July 2021 floods, for instance, is estimated at €46 billion, of which only €9 billion was covered by insurance, according to a statement by a board member of reinsurance company Munich RE.

Critical infrastructure vulnerabilities during extreme climatic conditions can transfer otherwise local impacts to entire sectors or regions depending on the infrastructure in question. This goes for inland waterways during droughts or floods. Extreme heat events can melt asphalt and buckle rails, and flooding can result in landslides or wash out foundations, destabilising railways and roads and limiting mobility and accessibility. Flooding can also lead to overflow in wastewater installations or accidental discharges from industrial sites contaminating drinking water across wider areas. Disruption of electricity supply can occur due to damaged power lines during storms or wildfires.

Droughts can also affect the energy sector with scarcity of water for hydroelectric generation or for cooling in thermal plants, and reduce the production of biomass for energy purposes. A lack of wind, typical during droughts, can bring wind power installations to a halt, while the efficiency of solar photovoltaics decreases with rising temperatures. As the energy demand for air conditioning increases during heatwaves, and renewables are put under pressure, fossil power plants can become necessary as backup. A 2018 article estimated that annual damage to critical infrastructure, due to climate change alone, will triple this decade (in the EU-28, Iceland, Norway and Switzerland). By 2050, the research indicated a six-fold increase from a 2017 baseline of €3.4 billion annually. Most
affected will be the industry, transport and energy sectors, while southern and south-eastern Europe have higher vulnerabilities linked to regional climate.

**WHAT NEXT? – Impact on the EU**

The 2018 special report of the Intergovernmental Panel on Climate Change (IPCC) concluded that the difference in risk between 1.5 °C and 2 °C is significant. Ecosystems upon which human wellbeing depend are already being affected by global warming. If countries fail to deliver on the latest commitments made, current action and policy trajectories could lead to warming of almost 3 °C by the end of this century. With global mean temperature rising, the long-term impacts of changing climatic conditions will start to show amid high impact extreme events. Changing seasonal characteristics can have an impact on tourism destinations for winter sports, for instance, affecting local economies. However, seasonal changes, such as increased temperatures and frequent droughts, are expected to affect the global agricultural sector significantly, through soil desertification and an increased need for irrigation. With increasing ocean temperatures and acidification, fish are likely to migrate or stocks reduce, affecting fishing communities.

**Systemic effects and feedbacks**

In a global economy, disruption caused by extreme weather events can result in increased prices due to scarcity of supply, ultimately having negative consequences for citizens. Research has shown that multiple extreme events occurring in different locations further amplify this impact, owing to ripple effects in complex supply chains. This points to a need to ensure supply chain resilience. Building such resilience in the context of extreme weather events is however challenging because of their variability and the difficulty of forecasting climate impacts accurately. For agriculture and forestry, for instance, appropriate seed and plant selection is a significant tool when it comes to building resilience against drought, fire, floods, storms and frost. Climate vulnerability within bio-based sectors increases asset risks and in the event of persistent drought or wildfires can have ripple effects on commodity prices, affecting food, construction, energy and textiles markets worldwide.

**Role of the insurance and finance industry**

Munich RE is expecting significantly higher rates for European reinsurance from January 2022, linked to the cost of 2021’s extreme weather events. In an article, the insurance giant points to the industry’s changing role, becoming a resilience provider through proactive risk monitoring and broader solutions for society. A 2020 report concluded that there was a need for forward-looking scenario-based risk frameworks to ensure financial stability in the context of green swan events. The report contrasts the certainty of the need to build resilience with the unpredictable and uncertain nature of future events. Citing potential cascading effects of climate change impacts and complex chain reactions, the authors warn of impacts on global financial and price stability. The overall message stresses the need to reprice climate risks, tilting investment preferences towards low-carbon and sustainable projects. The EU taxonomy would have a role in any such reorientation of finance. A Swiss RE analysis estimates the global protection gap for weather-related losses at 70%.

**Proactive adaptation and risk management**

Article 5 of the European Climate Law sets out a requirement to enhance adaptive capacity and resilience to reduce the EU’s vulnerabilities to climate change. Member States report on a number of climate-related hazards, and the Commission must review measures to ensure adequacy. Member States are also required to deliver risk assessments under the EU civil protection mechanism. To assess vulnerabilities, impacts and risks relating to extreme climate phenomena, it is necessary to ensure that loss data is harmonised by means of standardised reporting frameworks. As a member of the Sendai Framework for Disaster Risk Reduction, the EU supports global approaches to disaster risk reduction, including standardised indicators. In its climate adaptation
strategy, the EU committed to ensure knowledge gathering and sharing through the Climate-ADAPT platform.

WHAT IF? – Three possible scenarios

The 2020 PESETA IV report assessed projected economic impact and welfare losses in the EU with global warming of 1.5 °C, 2 °C and 3 °C. While some sectors, such as agricultural crops, might experience positive welfare change at the 1.5 °C level, the overall economic loss from such warming is estimated at €42 billion annually. The 3 °C warming scenario sees annual welfare loss of €175 billion (1.38 % of gross domestic product), with €83 billion estimated for 2 °C.

What the EU does will determine which impacts or cascading effects might materialise, both internally and externally. The scenarios below illustrate aspects of how the Union might react to impacts of extreme weather events or in the worst-case scenario find itself lacking capacity.

**An unsettled outlook with sunny spells**

In this short-term scenario, the occurrence of extreme events generates awareness of the need to identify vulnerabilities, predict future events and take protective measures. Early warning systems are put in place in some locations – mostly those affected by recent events. The construction of buildings and infrastructure in at-risk areas continues, as unwillingness to take decisive action prevails and systematic risk assessment is missing. Action remains scattered, with limited coordination or system-wide changes.

**An improving forecast with scattered showers**

Under this scenario, a series of extreme weather events leads to dramatic loss of life and property. To prevent future damage, high standards are adopted to guard against floods, heat waves and droughts. Protective infrastructure is upgraded with a focus on working with nature through nature-based solutions, and regulations limit new construction in risk zones while assets are relocated following systematic risk assessments. Partnerships are kicked off on global early warning systems as well as with the insurance industry to close the protection gap. A strong EU taxonomy directs investment towards low carbon activities, and an updated climate and energy legislative framework drives emission reductions across the economy, both helping to mitigate further warming. The EU takes an active role in climate leadership and diplomacy, ensuring dual adaptation and mitigation efforts and finance mobilisation for areas at risk from extreme climate phenomena worldwide.

While this approach is quite effective at preventing damage, the costs for homeowners and public authorities are substantial and in some cases prohibitive. Public resentment rises as citizens and businesses alike feel the restrictions on personal freedom of choice.

**The perfect storm**

Commitments made in the Glasgow Climate Pact to increase climate action in the critical decade towards 2030 fall short, with disastrous global warming as a result. As temperatures continue rising, the North and South Poles and tundra melt, and the world’s forests burn at increasing rates. The greenhouse gasses released by such events further accelerate climate change, reaching tipping points for the Earth’s climate system. Rapidly changing climatic conditions create a tsunami of impacts with cascading effects. Famine and extreme weather events put livelihoods at risk and lead to increased number of migrants and climate refugees. EU external action directs resources towards development aid and civil protection measures, while trying to stem migration at the EU’s own borders through neighbourhood negotiations. The EU commits further resources to help stem conflicts in vulnerable areas though various multilateral forums. Meanwhile, inside the Union a lack of preparedness undermines agricultural outputs as traditional crops fail in prolonged droughts in southern Europe and are washed away in central and northern Europe. Extreme weather events disrupt critical infrastructure, and lives are lost in heatwaves and floods. Health systems start to
experience capacity issues owing to increased air pollution, heat strokes and direct physical injuries from the events. Heatwaves reduce worker productivity, further lowering economic output. Europe finds itself unable to maintain the necessary multilateral engagement to stem external geopolitical risks as internal pressures mount. Reinsurance rates become too steep, leading to bankruptcy for insufficiently covered insurance providers following ever-increasing claims from recurring weather shocks. Disruption of global and European supply chains leads to inflation, and commodity prices mount. Financial losses and debts strain banks and public authorities. With assets lost and runaway global inflation and insolvency, markets crash – leaving the EU and its Member States unable to raise recovery and relief packages as destabilised financial systems start to crumble.

Figure 9 – Charting the impact of 'the perfect storm' on four key factors

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Very high energy prices

WHAT? – State of play

Russia's war against Ukraine has demonstrated the EU's dependence on Russian coal, oil and gas. Already before the war, throughout 2021, energy prices rose considerably – a surprising development given the collapse of energy prices at the start of the Covid-19 pandemic. Since the invasion started, energy prices have risen even more dramatically, forcing consumers to pay more for petrol, heating and electricity.

According to the International Energy Agency and many other commentators, the rise in energy prices before the war was linked to economic recovery, including the resumption of activities suspended during the pandemic lockdowns and the resulting adaptation of complex supply chains to abrupt shifts in supply and demand. The war has further accelerated price rises and led to a debate over the pros and cons of a complete embargo of coal, gas and oil imports from Russia – as requested, for example, by the European Parliament in its plenary resolution of 7 April 2022. The problems for Europe are most acute in the gas sector, owing to Europe's heavy reliance on pipeline supplies from Russia. While there is no unified price for gas, with long-term supply contracts often set on confidential terms, the leading EU market hub is the Dutch Title Transfer Facility, where gas prices increased more than nine-fold from €19.00 on 30 December 2020 to a peak of €180.27 on 21 December 2021 per megawatt hour, before falling off somewhat in mid-February 2022. Yet EU gas prices remain around four times higher than at the end of 2020, with few prospects of a return to such low prices. Other factors contributing to high gas prices include a cold winter in early 2021 followed by insufficient storage levels; lower than typical levels of wind power for meteorological reasons (thereby increasing dependence on gas for electricity production; and dwindling levels of EU gas production (see the European Commission's gas and electricity market reports for Q2 2021).

In principle, the EU has had access to diversified and competitively priced gas imports, whether by pipelines from Russia, Norway and Algeria, or via liquefied natural gas (LNG) tankers from a broad range of supply countries. As energy demand grew with the global economic recovery, LNG supplies were diverted to countries outside Europe that have no access to pipeline supplies and must therefore accept higher prices, especially in Asia. This increased EU dependence on Russia, which remains the EU's largest supplier of pipeline gas and is the source of over 40% of gas imports. Whereas state-owned Gazprom continued to fulfil its long-term contracts for pipeline supply in 2021, it was unwilling to place additional volumes on short-term markets and delayed filling its own storage sites, contributing to the rise in gas prices (see ACER report). Potential reasons for Russia's approach include geopolitical tensions with the EU over Ukraine; profit taking from stoking up gas prices; efforts to display the value of long-term supply contracts over short-term market pricing; and a bid to exert political pressure to have the Nord Stream 2 pipeline approved. In January 2022, the head of the International Energy Agency, Fatih Birol, concluded that Russia was deepening the energy crisis with Europe for geopolitical reasons. In response, the European Commission has been gathering information on potential market manipulation by Gazprom.

While gas generates the most concern in Europe in terms of security of supply, price rises have been widespread across all fossil fuels. Coal prices (GC Newcastle futures) more than quintupled from US$81.6 per tonne on 30 December 2020 to a peak of US$422.65 per tonne on 7 March 2022, and has since settled on a high level (US$285 per tonne on 7 April 2022). Nevertheless, the more dramatic rise in gas prices in 2021 led to considerable gas-to-coal switching in the EU electricity sector in 2021, going against Europe's decarbonisation efforts. Meanwhile, crude oil prices (Brent) rose steadily from US$51.63 on 30 December 2020 to US$123.5 (7 March 2022), and has since settled above the psychologically significant barrier of US$100.
Although the cost of producing electricity is lower from renewables and nuclear energy than from fossil fuels, the EU’s marginal pricing model means the most expensive energy source used to generate electricity (usually gas) sets the electricity price paid by consumers. This has contributed towards a **+180 % rise in wholesale EU electricity prices** (August 2020-2021), even as renewable energy sources (42 %) have overtaken fossil fuels (32 %) in their share of EU electricity production. To a certain extent, the rising costs of EU emissions trading system (ETS) credits have contributed towards higher electricity prices. Over a single year, futures prices for European emission allowances almost trebled from €33.7 per tonne of CO₂ (4 January 2021) to a historic peak of €96.7 per tonne of CO₂ (7 February 2022). Yet a period of sustained high prices for ETS allowances constitutes a powerful incentive to phase out the most polluting fossil fuels, and so can ultimately be positive for energy transition. Even if the increased price of ETS allowances has contributed towards the generalised increase in EU electricity prices, the Commission estimates that the effect of rising wholesale gas prices has been nine times greater. Energy taxes and levies are also significant, accounting for 41 % of EU household electricity prices (30-34 % for industry) and 32 % of EU household gas prices (only 13-16 % for industry).

**SO WHAT? – Risk factors involved**

High energy prices over a sustained period of time pose a series of economic, social, environmental and geopolitical risks for Europe. Some are very timely; others will only emerge over time.

The most immediate impact is an economic one as high energy prices act as a constraint on consumers, reducing their purchasing power and altering their consumption patterns. This is particularly worrying for poorer consumers, who already spend a high share of their income on energy and are more likely to suffer from energy poverty, limiting their capacity to pay for energy services (e.g. heating their homes) and cover other essential expenses. Since the EU is a net importer of energy (dependency rate of 61 %) rising prices push inflation up directly through energy bills. High energy prices are the main driver behind current EU inflation levels, estimated at 7.5 % in March 2022, and also have an indirect impact on inflation, since energy constitutes a key input in many economic processes, such as manufacturing, extraction and production of raw materials, agriculture and fisheries, etc. The most detrimental impact is in energy-intensive businesses, such as fertilisers and steel, which could even see production temporarily curbed due to very high prices, leading to severe problems throughout the supply chain. A prolonged period of very high energy prices may lead to a loss of economic confidence among EU businesses and consumers and even bankruptcies. However, in the short term, the negative effects may be partly mitigated by more positive economic considerations: the record level of EU investment in national economies via the Next Generation EU recovery plan, and consumers spending a share of the forced savings they accumulated during the lockdowns. Even so, high energy prices inevitably increase long term demands on public expenditure, whether because of the need for state intervention to support energy businesses and consumers, or because public sector salaries and project costs have to be increased to take account of inflation.

High energy prices are likely to impact on the EU’s climate policy. The EU is developing a framework to deliver a 55 % reduction in greenhouse gas (GHG) emissions by 2030, as an intermediate step towards the long-term goal of climate neutrality (net zero GHG emissions) by 2050. Both targets are set out in the European Climate Law. High energy prices could reduce the capacity and the willingness of consumers and businesses to cover the costs of this ambitious energy transition, while making it harder for governments to provide sufficient resources to underpin the process. There is a risk that some citizens will see the green transition as a driver of higher energy prices, even if high fossil fuel prices provide justification for further investment in renewable energy sources and in energy efficiency to curb consumption. Although wholesale energy markets are international and hard to influence, the choice of energy sources and the degree of taxation and/or subsidies provided is determined by governments, and these bear heavily on the final price. Consumers may prove more unwilling to subsidise clean energy projects via their household bills, or to cover the costs of
phasing out or converting power plants that run on fossil fuels. Yet in the longer run, there may be considerable advantage for EU consumers in reducing their reliance on fossil fuels, especially imported ones, if prices remain high compared with locally generated and cleaner renewables. Domestically generated energy also results in far fewer security of supply concerns and will help to end EU dependence on energy imports from Russia. The question is how the EU and its Member States can manage the delicate politics of transition towards clean energy, if a situation of high energy prices remains.

High energy prices pose a geopolitical risk for the EU, in that they increase dependence on unreliable third country suppliers such as Russia, the leading provider of gas, crude oil and coal to the EU. Given this high level of energy dependence, Russia has an ideal opportunity to play divide and rule among Member States keen to secure more favourable energy prices, making it difficult for the EU to present a unified front in negotiations. The earlier debate over the Nord Stream 2 pipeline highlighted many of the fissures between Member States, while at the same time the EU sought to portray a unified diplomatic front against Russia’s efforts to destabilise and threaten the sovereignty of Ukraine. Since the invasion in February 2022, this issue has gained greater potency and shown the importance of the EU speaking with one voice in external energy relations.

**WHAT NEXT? – Impact on the EU**

The Commission put forward a communication on energy prices in October 2021, together with a toolbox of measures that Member States can use to support consumers without distorting the single market. These include temporary reductions in energy taxes, social transfers to vulnerable consumers, and a time-limited deferral of payments and/or price increases. The Commission does not support a radical revision of EU energy policies, and continues to favour its marginal pricing model. It perceives that the only viable long-term solution is to decarbonise fully and phase out fossil fuel use, so high energy prices constitute yet another reason to double down on the European Green Deal and pursue ambitious climate action. On 15 December 2021, the Commission proposed a new EU framework to decarbonise gas markets, promote hydrogen and reduce methane emissions. This proposal also aims to improve the EU’s gas storage coordination and create the option for voluntary joint purchase of gas reserves. A new EU external energy strategy is due in 2022, reflecting the importance of closer engagement with both producer and consumer countries, in order to address some of the underlying problems in global energy markets. In May 2022, the European Commission is set to reveal the details of its RePowerEU strategy, with the aim of shifting rapidly away from reliance on Russian coal, oil and gas.

On 16 December 2021, the European Council discussed the hike in energy prices currently affecting citizens and businesses, but without adopting new conclusions. As energy prices continued to increase as a result of Russia’s invasion of Ukraine, the European Council adopted conclusions on 24-25 March 2022 seeking to counter the negative effects of high energy prices. In particular, the European Council supported a relaxation of the state aid framework for energy (allowing for example taxation of windfall profits), looked at short-term measures to counter high gas and related electricity prices, and called on the Commission to submit proposals that would prevent electricity prices being distorted by exceptionally high gas prices. At the current time, a majority of Member States do not support a radical change in the design of EU single market policies, and instead back the marginal pricing model as the most efficient one for setting energy prices, as well as the best mechanism to promote renewables such as solar and wind. The latter have low production costs (once the upfront costs of installation are covered) but can benefit from higher payments under marginal pricing, thereby encouraging further renewable investments. Other Member States, such as France, consider that marginal pricing does not reflect the low production costs of energy sources such as nuclear, and results in consumers paying too much for their energy. Spain has also criticised the marginal pricing model for escalating electricity prices by making them contingent on high and variable gas prices. The position of Member States could shift if the price crisis continues over the coming months and years. In addition, Commission President Ursula von der Leyen and US
President Joe Biden published a joint statement on US-EU cooperation on energy security, agreeing to cooperate closely on energy policy, decarbonisation and security of supply, in particular on LNG supplies.

The European Parliament has similar differences of opinion on energy price rises, as illustrated in a plenary debate on the topic on 6 October 2021, following a statement by Energy Commissioner Kadri Simson. Parliament will be adopting its positions on the Fit for 55 package in a context of high energy prices, which could also affect the tone of interinstitutional negotiations with the Council and the Commission in 2022 and 2023. There will be heightened sensitivity around aspects of the ‘fit for 55’ package that could increase the burden on consumers, such as the proposed revision of the EU emissions trading scheme (ETS) to establish a separate emissions trading system for fuels used in the buildings and road transport sectors. A proposed reform of the Energy Taxation Directive (ETD), which would set higher minimum tax rates on fossil fuels, could also fail to achieve the unanimity in Council necessary to reform the ETD. High energy prices may though provide greater impetus behind other elements of the fit for 55 package, such as the Energy Efficiency Directive (EED) and the Renewable Energy Directive (RED). One of the obvious solutions to high prices and dependence on imports is to curb energy consumption, and this is the primary objective of the EED. Transitioning to cleaner, lower cost and locally generated renewables is arguably the EU’s main long-term strategy to address the problem of high imported fossil fuel prices, and one of the key objectives of the RED. There is also likely to be considerable discussion about the scope and scale of the proposed social climate fund, which aims to compensate vulnerable consumers for some of the costs of the green transition.

**WHAT IF? – Three possible scenarios**

The enduring effects of high energy prices on the EU will depend to a significant extent on how large and sustained the price increases turn out to be, as well as the collective response of political actors and the general public to this development. The first scenario is more probable if high energy prices are a temporary phenomenon, lasting no more than a year or two. The second is more likely if prices remain exceptionally high in the medium term (three to five years). The third scenario, which is highly disruptive, could even come about to some extent if energy prices remain very high as well as volatile over an extended period of time (around five to ten years).

**Keep calm and carry on**

This is the most optimistic scenario, broadly consistent with the views expressed by the Commission in its communication and toolbox on energy prices. Energy price rises are a transitory phenomenon linked to the readjustment of economies after the coronavirus crisis, and should not therefore affect the achievement of the European Green Deal. Energy prices will hit a peak in the coming months but then start to fall steadily in the spring as less energy is consumed (i.e. gas for heating). Similar views have been expressed by a group of IMF economists, albeit on a global scale and not taking into account the effects of the war in Ukraine. Fossil fuel prices will stabilise at a lower level than at present, but remain sufficiently high to provide financial incentives for Member States to promote cheaper renewable sources. Major players in the EU energy market will absorb these temporary high prices without widespread failures, while Member States find ways to compensate vulnerable consumers for exceptional energy costs in a way that does not disrupt the EU single market. This scenario necessarily hinges on a peaceful resolution of the war in Ukraine and some resumption of gas supplies from Russia, allowing much lower prices.

**Muddling through**

Under this scenario, energy prices continue to rise this winter before settling at a relatively high level, becoming a major driver of price inflation and restricting the purchasing power of consumers, thereby slowing down the pace of economic recovery. EU energy markets become unpredictable, especially if high prices are accompanied by greater market volatility, exacerbated by geopolitical
tensions. Member States take unilateral and uncoordinated measures to keep their energy markets functioning and retain public support (something that has already been happening), undermining the coherence of the EU single market. There is greater questioning among citizens and politicians about the thrust of EU climate and energy policies, especially in terms of the level of ambition and the timeframe, as well as the sharing of the burden. This could lead to contradictory approaches and tensions just when important EU legislation needs to be agreed ('fit for 55' package, gas markets package). Third-country suppliers such as Russia retain considerable leverage over EU energy markets, without being able to undermine them completely.

**The great unravelling**

Under this scenario, energy prices rise to unprecedented levels and display considerable volatility over the coming years. Energy prices act as a major brake on Europe’s economic recovery and cause a considerable loss of confidence and purchasing power among consumers. Member States adopt contradictory and divergent measures to deal with the problem, undermining the single market in energy without reaching an agreement on how to reform it. Citizens link high prices to the costs of energy transition, leading to lower climate ambition and lower investment in renewable sources and technologies. Fossil fuel suppliers capitalise on high prices to retain their market share. Third countries retain considerable blackmail potential over the EU and its neighbourhood, through their continued dominance in fossil fuel production and supply.

**Figure 10 – Charting the impact of 'the great unravelling' on four key factors**

![Figure 10](image)

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Another major pandemic

WHAT? – State of play
The Covid-19 pandemic has shaped the world in unprecedented ways. As of February 2022, there had been approximately 400 million cases and 6 million deaths worldwide, as well as 114 million jobs lost in the first months of the pandemic alone, equivalent to a US$3.7 trillion economic loss. Current challenges include pressure on healthcare systems, slow economic recovery, the disruption of supply chains and increased goods and energy prices, question marks surrounding the global distribution of vaccines and vaccine copyright, the development of new pharmaceuticals and the emergence of ‘anti-vax’ extremist groups. With all this in mind, what lessons have been learned from the pandemic, is another pandemic inevitable, and what would be the impact on the EU?

SO WHAT? – Risks factors involved
An infectious disease can turn into a global pandemic when three major risk factors interact: pathogen, host and context.

Pathogen
The agent of an infectious disease can be a virus, bacterium, fungus, protozoa or even a prion (a self-replicating protein). It can increase in virulence by receiving virulence and/or antimicrobial-resistance genes from other pathogens, as well as by increasing its ability to resist inside the host. In fact, by 2050, antimicrobial-resistance is predicted to surpass cancer as a major source of death – an outright pandemic. The success of the causing agent of Covid-19, SARS-CoV-2, and in particular of its latest Omicron variant, lies in a recombinant ‘spike’ protein that increases attachment to host cells and boosts the survival of the virus.

Host
A second factor is the strength of the host immune system. Host and pathogen interact and adapt continuously to exploit each other’s fragilities. As such, it is not possible to measure pathogenicity outside of a host-pathogen relationship. Factors affecting the immune system include eating habits, exercise, mental health and levels of exposure to sunlight.

Context
The third factor is context. This can include environmental conditions (temperature, humidity and sunlight), hygiene conditions, and sociological, geographical, economic, political and ecological factors. While the pathogen and host factors are more difficult to control, it is possible to develop policy to monitor, control and prevent several aspects relating to the context.

- Weather
  - As is common with respiratory viruses, Covid-19 prefers lower temperatures and intermediate relative humidity (40-60 %). Although not yet endemic, a seasonal pattern seems to be developing for Covid-19, with a worsening of cases in the wintertime in the Northern hemisphere. Lower temperatures favour social behaviour involving more inside gathering. Other pathogens have different patterns: malaria, caused by a parasite transmitted to humans by a mosquito, develops at an optimal temperature of 25 ºC and higher humidity. It is difficult to predict what weather conditions will favour a future pandemic-causing pathogen, but it will largely depend on the transmission method.

- Environment
  - Environmental conditions include air pollution, contaminated water and hygiene practices. Contaminated water is the source of infection of cholera for instance.
There is a link between Covid-19 and air pollution. Personal protection measures (mask wearing, social distancing) can limit disease propagation, and should be applied across the board (by individuals, in the food industry, and in healthcare systems, with examples set by media personalities and politicians).

- **Socio-geography**
  - An immediate factor defining the spread of a new pandemic is the modern democratisation of travel, meaning the unprecedented ability for individuals to travel across countries and continents at both increased speed and reduced cost. Indeed, the first measures taken to stem Covid-19 contagion involved temporary limitations on both local and international movement.
  - Other socio-geographical factors to consider are demographic changes (e.g. movements of certain parts of the population from big cities to the countryside) led by changes in working conditions (e.g. teleworking) resulting from the Covid-19 pandemic.

- **Public health**
  - The burden on healthcare facilities has been a key factor in policy-making during the Covid-19 pandemic. Understaffing, a lack of hospital beds, delays in surgical operations and in treatment of other diseases, the push to develop vaccines and new antimicrobials, and disease monitoring, control and prevention, would all combine to determine the course of any new pandemic. From monitoring, to prevention and mitigation, public policy will have to include investment in public health, at both national and EU levels.

- **Public perception of risk**
  - The public perception of risk does not always align with real scientific risk and has a direct impact on the implementation of prevention measures and willingness to get vaccinated. Investment in the education of and communication between politicians, scientists, journalists and the general public is one of the most effective measures that can prevent or tackle an emerging pandemic directly.

- **Exploration of natural resources**
  - Future pandemics could emerge from the exposure of humans to pathogens unknown to the immune system, arising from exploration of natural resources such as rainforests, the consumption of wildlife, intensive agricultural practices, and the acceleration of climate change. These issues are made even more complicated by the increase in world population growth and the need to alleviate food insecurity.

- **Laboratory safety and bioweapons**
  - Laboratory facilities that deal with biological agents are classified with one of four possible containment levels, as per an EU directive and WHO recommendations. Each level (P1 to P4) entails a set of safety requirements. However, responsibility for implementing these levels rests with individual countries.
  - In the past, a few countries (France, Japan, Russia, the United Kingdom and the United States) have admitted to developing bioweapons, notably, anthrax, Ebola, the black plague, cholera and yellow fever). New gene-editing technologies, such as CRISPR, offer the ability to develop specific biological weapons fast and at low cost. The downside is the difficulty in containing a weaponised infectious agent geographically, as it can easily spill over and lead to a global pandemic.
  - Other, no less worrying, types of bioweapons are anti-crop/anti-livestock/anti-fisheries weapons that attack humans indirectly, such as herbicides, mycotoxins and pathogens specific to livestock and fish (e.g. foot-and-mouth disease and enterotoxins). Together with antimicrobial resistance, these could contribute indirectly to the emergence of a global pandemic.
WHAT NEXT? – Impact on the EU

In addition to its immediate and long-term health impact, the consequences of the Covid-19 pandemic have included the greatest depression since the 1930s, disruption of trade and supply chains, rising unemployment and worsening mental illness, increased cases of gender violence, reduced quality in public education, the decline of the cultural industry, and social inequity. The impact of a new pandemic on the EU will depend on the interplay between scientists, policy-makers, communicators and the public.

A number of risk factors, from environmental and weather conditions, to sociological, economical, health, geopolitical and ecological considerations have been identified. Part of preventing a new pandemic involves learning lessons from the current one, not least in relation to the public response. It is necessary to understand the causes behind citizen mistrust in government and public policy, including health protection measures such as vaccination, and to invest in education and better communication between scientists, politicians, journalists and citizens. Other factors at play will involve structural changes in EU policy in different areas, including public health research and development, labour law, economic development and climate change.

WHAT IF? – Three possible scenarios

Three different scenarios can be envisaged in the event of a new pandemic.

The strong approach

A ‘strong’ approach to a new pandemic would involve population containment measures as performed by most EU countries during the Covid-19 pandemic: lockdowns, business closures, testing and tracing, generalised use of personal protection equipment and travel restrictions.

The soft approach

A ‘soft’ approach would be closer to the Swedish Covid-19 model: no restrictions except for voluntary social distancing. This approach led to a reduced economic impact, but far more deaths.

The precautionary approach

The third scenario is a precautionary approach, meaning prior investment in crisis prevention, preparedness and response. Possible ramifications are:

- the implementation of a ‘one health’ approach that is transversal to human health, animal health and the environment;
- the development of vaccines, pharmaceuticals and the release of individual patents;
- the development of EU legislation on public health, which is currently a Member State competence;
- investment in public education, with a resulting change in citizens' attitudes and perception, including trust in local governments and the EU, and vaccination strategies;
- the maintenance and training of a network for infectious disease surveillance and monitoring, including surveillance of antimicrobial resistance;
- a change in labour laws to accommodate new ways of working (teleworking) and safety at work (monitoring of CO₂ levels, investment in air filters, restructuring of common spaces);
- economic/ecological considerations: development of policy on climate change; EU ‘soft pressure’ to ban ‘wet markets' worldwide.

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Is a public debt risk looming post-Covid?

WHAT – State of play

The deliberate shutdown of the economy triggered by the Covid-19 pandemic resulted in an unprecedented economic fallout. Adverse economic effects on European economies called for a rapid and vigorous response as governments stepped in to adopt budgetary, liquidity and policy measures to keep the economic damage at bay. The mitigation of a more severe economic downturn through a strong fiscal policy response was aided by the activation of the general escape clause\(^1\) in March 2020 by the European Commission and the Council, allowing Member States to undertake appropriate budgetary measures in the face of exceptional circumstances. The clause was extended by the Commission in March 2021, and is likely to be extended to 2023 in light of the conflict in Ukraine, providing fiscal headroom to back the economic recovery. The economic challenges were further met by the ECB with a €1.85 trillion pandemic emergency purchase programme (PEPP) and the EU’s Next Generation EU (NGEU) initiative, which together provide a coordinated monetary and fiscal expansion across the EU.

The severe economic impact led to a substantial shift in EU fiscal policy guidance. According to the latest Fiscal Monitor, published by 29 national independent fiscal institutions in 24 EU Member States and the United Kingdom, on average the budgetary impact of the adopted fiscal stimulus amounted to 5 % of GDP in 2020\(^2\) and around 4 % of GDP in 2021.\(^3\) This in turn led to a stronger-than-expected economic recovery reported in 2021 (5 % on average), after a historic slump in 2020 of -5.9 %. However, expectations are that Europe is at an early stage of an adverse economic shock to its economy – just when the recovery from the pandemic had become more firmly entrenched – as the economic implications of Russia’s invasion of Ukraine are likely to be significant.

**Figure 11 – General government gross debt in EU Member States, 2019 Q4 and 2021 Q3, % of GDP**

While the strong policy response was successful in mitigating the impact of the pandemic and supported a faster-than-expected recovery, according to the European Fiscal Board (EFB), which assessed the implementation of the EU fiscal framework, the containment of the pandemic led to a heavy deterioration of public finances. The government debt-to-GDP ratio for the euro area exceeded 100 % for the first time in the first quarter of 2021, with a ratio of 100.5 %, compared with
83.6 % two years earlier. Similarly, EU countries’ debt-to-GDP ratios increased from 77.2 % to 92.4 % in the same period, thus increasing the debt ratio by 14 percentage points on average. However, since peaking in the first quarter of 2021, the aggregate debt-to-GDP ratio is set to broadly stabilise or even reduce in 2022. Nevertheless, those numbers mask significant differences between countries. The highest ratios of government debt were recorded in Greece (200.7 %), Italy (155.3 %) and Portugal (130.5 %), while debt levels were lowest in Estonia (19.6 %), Bulgaria (24.2 %) and Luxembourg (25.3 %) (see Figure 11).

SO WHAT – Risk factors involved (financial fragmentation; fiscal dominance)

Accumulated sovereign debt in the Member States limits governments’ capacity to respond to economic challenges, increases governments’ financial vulnerability to interest rate shocks and impedes central banks’ margin for manoeuvre. Risk factors affecting the sustainability of public finances include the decline in potential growth, mooted convergence progress between countries, the persisting sword of Damocles of a doom loop between governments and banks, and the risk of financial fragmentation should financing conditions get tighter. The latter, in particular, has given rise to concerns about fiscal dominance.4

Against this backdrop, fiscal efforts have passed their peak and fiscal support is becoming more and more targeted and is shifting from temporary emergency measures to recovery support measures. Once the expansion is more firmly entrenched, Member States are expected to start their fiscal consolidation. In this context, the European Commission published its regular Debt Sustainability Monitor in February 2021. The key findings were that government debt was expected to fall gradually over the medium term, albeit starting from an elevated level. Debt projections on aggregate headline deficits point to 4.1 % of GDP and a debt-to-GDP ratio of around 96 % in 2022.

In light of surging inflation rates, the ECB, which has catered for favourable financing conditions in the last few years and, in particular, during the pandemic crisis, has been put to the test as to when and how it will react to inflationary pressures.5 Due to the Russian war of aggression in Ukraine, inflation is likely to increase further, with underlying price pressure broadening and lingering supply-side bottlenecks. At the same time, there has been a general repricing in bond markets and sovereign debt spreads have been widening in euro periphery countries.6 This in turn created concern about financial fragmentation, since rising interest rates will have an effect on the borrowing capacity of Member States and their debt sustainability. While the ECB will terminate net asset purchases under the PEPP as planned in March 2022, the maturing principal revenues will be reinvested until at least the end of 2023 with the flexibility to counter market fragmentation.7 It is unclear whether this will be enough to rein in sovereign bond spreads, not least as the ECB’s primary mandate is to ensure price stability through functioning monetary transmission, and since it uses bond purchases to fulfil this mandate. By-products of those bond purchases are historically low sovereign bond yields and debt servicing costs. To fund the unprecedented fiscal policy interventions during the pandemic, several Member States relied heavily on the ECB’s bond purchase programmes. Nevertheless, while sovereign debt levels are at a record high, the overall debt servicing costs have been declining steadily since the mid-1990s8 and are lower than growth rates (r<g, see scenario 2). Moreover, the average maturity of public debt in the euro area is around 7.9 years, so it would need a substantial and permanent shift in bond yields to drive average interest payment levels higher.

In this vein, the Commission’s assessment of euro area countries’ 2022 Draft Budgetary Plans makes a distinction between Member States with low/medium debt, which should pursue or maintain a supportive fiscal stance,9 and Member States with high debt, which should use the Recovery and Resilience Facility (RRF) to finance additional investment in support of the recovery, while pursuing a prudent fiscal policy. The ECB similarly calls for balancing a safe and sustained exit from this crisis with remaining attentive to fiscal sustainability, as the largest deficits in 2022-23 are projected for several countries that already entered the pandemic period with high government debt-to-GDP ratios.
The Commission's debt sustainability analysis of the Member States' 2021 Stability and Convergence Programmes offers preliminary thoughts on the impact of the RRF on general government debt projections. RRF-related 'grants and other sources of EU financing will boost public investment in Member States by an average of about 0.5% of GDP per year in 2021 and 2022, thus helping Member States to maintain supportive fiscal stances'. Furthermore, the RRF will contribute to a lengthening of average debt maturity, further insulating Member States' financing costs from short-term fluctuations and reducing rollover risks.

WHAT NEXT – Impact on the EU

The question going forward is where we stand on public debt, or, in other words, how to strike the right balance between debt sustainability on the one hand and the investment demands necessary to support the recovery, improve resilience and foster the green and digital transitions on the other hand. To approach this question, the European Commission has relaunched its review of the EU's economic governance framework, a debate first launched in February 2020, but later suspended to focus on responding to the economic and social impact of the Covid-19 pandemic. This triggered a vibrant debate in particular on how to improve the European fiscal framework.

A centrepiece of various reform proposals is the debt anchor. Proposals range from simply increasing the debt ceiling to 100% to a country-specific debt anchor (IEAF and FEF) or a simplified two-tier framework that consists of an expenditure rule linked to a debt anchor (EFB), to abandoning fiscal rules entirely and instead suggesting a set of fiscal standards including stochastic Debt Sustainability Analysis. One particular component of the SGP that reform proposals focus on is the 'debt reduction rule', which requires an annual reduction of the debt ratio by 1/20 of the difference between the actual debt-to-GDP ratio and the 60% threshold.10 Several proposals are shifting away from the rigid debt-to-GDP ratio and instead suggesting that fiscal policy should be focusing more on the demand side, since the long-term effects of insufficient demand (the so-called hysteresis effect) have a large impact on sovereign debt sustainability. For instance, Furman and Summers criticise the general concept of the debt-to-GDP ratio as it mixes stock (debt) and flow (GDP) measures. They propose to use a fiscal policy anchor related to government interest payments, thereby limiting the cost of public debt via a real interest payment to GDP ratio rather than comparing debt stock to one year’s GDP. The EFB proposes to take into account countries’ different starting positions in their debt levels and propose country-specific paths for debt reduction. Bruegel proposes a 'green fiscal rule' tailored towards necessary (green) public investment, by which public investment spending could be exempt from the fiscal constraints in order to meet the EU's climate goals. Similarly, Grégory Claeyss et al. from Bruegel propose amending the European fiscal framework with a 'golden rule' to allow the financing of specific investments. Another strand of proposals highlighted the need for a permanent central fiscal capacity. As part of a triple-pack suggestion, Carlo Cotarelli proposes an EU-level investment capacity that would allow for SGP rules to stay in place while being unaffected by the need to increase green public investments. Similarly, in its recent Article IV consultation, the IMF argues that a central fiscal capacity and a green investment fund would complement the fiscal rules and allow for better incentives, by making access contingent on compliance with the fiscal rules. The surge in public debt due to the pandemic has exacerbated the difficulty of applying the current fiscal rules; therefore, a reformed fiscal framework that ensures more efficiency in preventing debt distress, as well as allowing adequate room for macroeconomic stabilisation and green investment, has been prompted by some stakeholders, including the European Parliament, before the general escape clause is lifted in 2023.

Meanwhile, additional instruments are in place to safeguard sovereign debt sustainability, should a Member State face financial distress -- for instance, through the temporary pandemic crisis support facility provided under the European Stability Mechanism (ESM).11 For Member States not in the euro area, medium-term conditional loans are callable through the Commission's balance of payments assistance facility. The temporary Support to mitigate Unemployment Risks in an Emergency (SURE) instrument has provided financial assistance of around €100 billion, in the form
of loans from the EU to affected Member States, addressing sudden increases in public expenditure made to preserve employment against the pandemic. Furthermore, the European Investment Bank (EIB) approved a €25 billion Pan-European Guarantee Fund to support EU businesses. An instrument from the 2012 sovereign debt crisis is Outright Monetary Transactions (OMT), which allows the ECB to intervene in the secondary sovereign bond market of euro area Member States, but under strict conditionality attached to an appropriate EFSF/ESM programme. The latest ECB monetary policy decision reflects concern regarding second-round effects and inflation expectations becoming unanchored. These concerns outweighed the uncertainty over the economic fallout from Russia’s invasion of Ukraine and its economic consequences. The ECB therefore prepared the conditions for policy rate increases once asset purchases end, to react to (supply side) inflation. In such a case, whether OMT is a politically viable option is unclear, as there has been reluctance to resort to an ESM programme due to the stigma effect related to the eligibility criteria.

In the medium term, Next Generation EU (NGEU) is expected to reduce the burden of national budgets to support the economic recovery and fill investment gaps that will support the green and digital transitions and increase potential growth. However, so far the strong economic recovery can be attributed to a very limited extent to the RRF component of NGEU, since the disbursement of funds from the economic recovery package of €807 billion started only recently with pre-financing payments up to a maximum of 13% of the country’s financial allocation. Nevertheless, NGEU provides new impetus for a reform of the own resources debate and is an unprecedented tool for coordinated fiscal efforts with significant spillover effects.

WHAT IF – Three possible scenarios

With this in mind, there are various scenarios that could shift the trajectory of sovereign debt risks in substantially different directions.

**Short term**

In the short run, a strong but uneven economic recovery is accompanied by a more and more targeted fiscal policy effort, with particular attention being paid to high debt countries’ fiscal stance juxtaposed with their sovereign debt spreads. The latter will depend heavily on the ECB’s monetary policy reaction to inflationary pressure going forward. Until now, both monetary and fiscal policy announcements had a pronounced effect on sovereign bond yields – in particular, high debt countries benefited from monetary policy intervention, owing to unprecedented flexibility in implementing bond purchases, while the EU’s fiscal policy announcements lowered yields more uniformly. When it comes to mitigating the economic ramifications of the conflict in Ukraine, fiscal policy might (again) take centre stage.

One major relationship on which public debt sustainability is heavily dependent is the one between the average interest rate that governments pay on their debt and the growth rate of the economy. Thus, a strong economic recovery with firmly entrenched economic growth is crucial for debt sustainability. The interest-growth differential (i.e. \( r-g \)) has been negative for many Member States since the global financial crisis, as interest rates have been persistently low. Evidence suggests that fiscal policy is more effective when the interest-growth differential is negative, a strong argument against premature fiscal tightening when GDP growth has not reached pre-pandemic levels in some countries. In expectation of GDP growth resuming, particularly in the context of the use of the EU recovery fund, in the short term the resulting \( r-g \) differential should be conducive to supportive fiscal policies. However, analysis shows that, during spells of negative differentials, Member States tend to reduce their fiscal efforts, partly offsetting debt reduction, particularly in highly indebted countries.

Only preliminary assumptions can be made about the implementation of reforms and investment under the NGEU/RRF and the potential positive and lasting impact on EU growth and thus on lower debt-to-GDP ratios in the coming years. According to the Commission’s baseline scenario, general
government debt should broadly stabilise at around 93 % of GDP in the EU as a whole by 2024, before declining from 2025 – benefiting from both the assumed progressive correction of the primary balance and a negative interest-growth differential.

**Short to medium term**

When it comes to strengthening the short- to medium-term dimension of public finances, the economic governance framework and fiscal rules in particular are crucial. In a communication in October 2021, the Commission argues for a rules-based framework with simpler fiscal rules using observable indicators for measuring compliance. The amount of proposals, of which only a fraction have been described above, shows how pertinent the question of fiscal rules and their implication for sovereign debt sustainability is. However, should the general escape clause be de-activated without a prior reform of fiscal rules, the SGP with the existing rules would be enforced from 2023 onwards, including the rule that obliges Member States to reduce their debt levels by 1/20 per year until it reaches the 60 % Maastricht target. Such a rule would coerce highly indebted countries into running significant primary surpluses and would consequently reduce their margin for fiscal efforts. Nevertheless, there is no conclusive evidence of a significant negative linear effect of high public debt levels on economic growth. More specifically, there is no clear universal threshold in public debt-to-GDP ratios beyond which growth falls, as suggested, for instance, after 2010 and the subsequent euro zone sovereign debt crisis.

In the medium term, the lengthening of debt maturities observed in recent years, relatively stable financing sources with a diversified and large investor base, and historically low borrowing costs supported by the ECB's interventions so far are expected to mitigate debt sustainability risks across the EU. The NGEU/RRF has reinvigorated the discussion around a central fiscal capacity and a joint debt instrument. The inability to use monetary policy for macroeconomic stabilisation leaves a government more vulnerable to not being able to roll over sovereign debt. Evidence suggests that, if governments lack monetary autonomy, lenders anticipate that the government may face a higher likelihood of defaulting on their debt in the event of a liquidity crisis, and therefore a run on government bonds is more likely. To reduce such risks, arguments have been made for a central fiscal capacity for macroeconomic stabilisation and counter-cyclical fiscal policy coordination.

The composition of government debt holdings can also play a crucial role for sovereign debt sustainability. For instance, domestic debt holdings can provide a more stable investor base. They can also make sovereign default less likely because of better incentives for debt repayment, as the cost of a potential non-repayment is borne by residents. At the same time, large domestic holdings of sovereign debt can have a destabilising effect, as they generate feedback loops between the public and private sectors during crises. This is particularly pertinent, since several Member States relied heavily on the ECB's bond purchase programmes, thus exposing the ECB to large sovereign debt in its balance sheet and to changing investor composition once the ECB unwinds its bond purchasing programmes.

**Medium to long term**

How we think about public debt (sustainability), fiscal policy and its role in the economy, as well as the corresponding fiscal rules, has changed significantly since the Maastricht Treaty – the treaty that provides a fiscal framework to ensure sovereign debt sustainability – was signed 30 years ago. Those rules established a system of multilateral economic surveillance to strengthen the coordination of Member States' policies. Looking 30 years ahead, fiscal policy is likely once again to play a very different role in the economy.

Confronted with significant investment needs to support the twin transition, while some countries might not have the fiscal capacity to afford necessary investments, fiscal rules need to cater for sufficient public and private investment while also ensuring that sovereign debt is sustainable. This is likely to be a balancing act with large spillover effects when it comes to green investments, for
which a well-designed fiscal framework having regard to debt sustainability is crucial. Given the euro area’s incomplete institutional architecture, addressing existing vulnerabilities will help the EU handle major future challenges and more structural economic and sovereign debt challenges, such as the costs of population ageing and the climate transition. These are relevant evolutionary dynamics shaping public finances in the long run.

**Figure 12 – Charting the impact of long-term public debt unsustainability on four key factors**

![Diagram showing the impact of long-term public debt unsustainability on four key factors: Wealth, Societal, Twin transition, EU in the world. The diagram indicates levels of impact: Major, Moderate, Minor.]

**References:**


Baarsma B. and Beetsma R., 'Reducing public debt need not be a punishment', VoxEU blog post, January 2022.


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1 The activated general escape clause does not suspend the procedures of the stability and growth pact, but allows the Commission and the Council to depart from the budgetary requirements that would normally apply.
Including automatic stabilisers, total fiscal support in the EU in 2020 is estimated to have amounted to approximately 8% of gross domestic product (GDP) according to the European Commission, half discretionary fiscal measures and half automatic stabilisers.

In addition, national governments adopted guarantee schemes with an overall envelope of 18% of GDP.

Fiscal dominance is a special case of financial dominance in which monetary policy is constrained to keep interest rates low or to continue asset purchase programmes in accordance with the current and future (national) fiscal policy choices.

While inflation drivers are mostly supply side driven (energy prices, supply bottlenecks), second round effects will need to be monitored carefully (wage increases, goods inflation), even though long-term inflation expectations have remained relatively well anchored in the face of surging public debt.

In ‘Self-fulfilling crises in the Eurozone: An empirical test’, Journal of International Money and Finance, Volume 34, April 2013, pp. 15-36, Paul De Grauwe and Yuemei Ji show that a significant part of the surge in the spreads of the peripheral Eurozone countries during 2010-2011 was disconnected from underlying increases in the debt-to-GDP ratios and fiscal space variables, and was associated with negative self-fulfilling market sentiments that became very strong after the end of 2010. In an updated version, ‘The fragility of the Eurozone: Has it disappeared?’, De Grauwe and Ji highlight that, during the pandemic, the new governance of the Eurozone prevented a new sovereign debt crisis, despite the fact that the pandemic shock was similar to the financial crisis of 2007-2008.

For the purchases of public sector securities under the PEPP, the benchmark allocation across jurisdictions is the Eurosystem capital key of the national central banks. At the same time, purchases are conducted in a flexible manner on the basis of market conditions and with a view to preventing a tightening of financing conditions that is inconsistent with countering the downward impact of the pandemic on the projected path of inflation.

The Commission revised its measure of the fiscal stance to better reflect the unprecedented fiscal measures. For instance, measuring the fiscal impulse is based on the annual increase in net primary expenditure relative to 10-year potential growth, where expenditures funded by the RRF and other EU funds are taken into account, which provides a fiscal impulse to the economy but are not reflected in Member States’ recorded budget balance. Also, it nets out temporary emergency measures taken in response to the crisis.

Article 126(2) TFEU and the reference values set in Protocol (No 12) specify a 3% limit to the actual or planned government deficit to GDP and a 60% limit to the ratio of government debt to GDP. The rationale behind these numbers has a political and an economic dimension. Politically, the values are based on the average debt ratio in the Union at the time, which was just below the reference value of 60% of GDP. Economically, the debt trajectory was assumed to reach an asymptote (it gets closer and closer to a fixed value), simply put as $b = d/y$, whereby $b$ is the debt ratio, $d$ is the debt ratio in per cent of GDP and $y$ is the nominal GDP growth rate of the economy. Now, assuming nominal GDP growth for the EU (EU-15 in 1992) to be around 5% (3% growth plus 2% inflation), with a 3% deficit rule we can see that $3 - \frac{5}{10} = 0.6$ is 60% of GDP. For more details, see Kamps C. and Leiner-Killinger N., ‘Taking stock of the functioning of the EU fiscal rules and options for reform’, ECB Occasional Paper Series No. 231, August 2019.

As of the time of writing, no EU Member State has requested to use the Pandemic Crisis Support instrument. For more information, see Pacheco Dias C. and Zoppe A., ‘The ESM Pandemic Crisis Support’, European Parliament EGOV Unit briefing, August 2020.

The total amount of €750 billion expressed in 2018 prices is equivalent to €807 billion in current prices. The absorption of RRF grants at EU level is estimated at around 1.5% of GDP over the period 2020-2023 according to the Economic Forecast Autumn 2021, European Economy Institutional Papers, 160, November 2021.


Stalling economy with possible slumpflation

WHAT? – State of play
The Covid-19 pandemic resulted in an unprecedented economic contraction in 2020, with EU real gross domestic product (GDP) falling by 6.1%, more than during the global financial crisis. The Member States and EU institutions reacted quickly, providing support that had reached €3.7 trillion by October 2021, to cushion the impact and provide support for citizens, workers and companies. While, for the moment, a deep and lasting economic crisis has been averted and economic results are encouraging, there are several risks that – separately or together – could put the recovery in jeopardy.

A first risk is more transmissible and/or deadlier SARS-CoV-2 variants, leading to new lockdowns. A similar concern is that, while the world focuses on the fight against Covid-19, a new pandemic emerges (see related chapter on the risk of another major pandemic).

A second potential risk stems from Russia’s invasion of Ukraine (see related chapter). The crisis could exacerbate the sharp increase in energy prices that the EU is currently experiencing, cause shortages in agricultural commodities, and create new logistical issues in supply chains.

The frustration of economic actors over the handling of the pandemic could add to the pressures caused by the increase in prices and inequalities in the recovery of employment across economic sectors. If this situation persists, it could lead to greater social unrest.

Yet another risk is that policies that have been put in place to support or protect the economy from the impact of the pandemic create or sustain ‘zombie’ companies.

Another risk could result from faster-than-anticipated monetary policy normalisation as a result of increased inflation. While the European Central Bank (ECB) announced in its March 10 meeting that it will revise the schedule for its purchase programme, the economic fallout from the Russian invasion of Ukraine could lead it to reconsider. A similar risk could stem from an adverse court ruling on one of the ECB’s programmes.

Yet another risk would be a faster-than-expected return to tight fiscal rules or fiscal consolidation, following the encouraging economic results and the high debt/GDP ratios.

With regard to Next Generation EU (NGEU) funds, there is the risk of Member States not absorbing the funds at their disposal. Also, while the distribution of funds available under NGEU includes stringent obligations on reporting and transparency, the EU institutions responsible for oversight – the European Anti-Fraud Office (OLAF), the European Court of Auditors (ECA) and the European Public Prosecutor’s Office (EPPO) – are underfunded and understaffed, while the amounts they are supposed to control and verify have increased significantly. This could lead to EU recovery funds being diverted to fraudulent schemes.

Another obstacle to the recovery could come from tensions in trade (tariffs/quotas and restrictions) and technology (due to the ongoing decoupling).

Last but not least, an important factor that could weigh on the medium-term economic recovery of the EU is risks related to climate change.

SO WHAT? – Risk factors involved
Another variant or a new pandemic altogether is not a ‘black swan’ but a ‘grey rhino’, i.e. a ‘highly probable, high impact yet neglected threat’ that occurs after a series of warnings and visible evidence. Although low in the very short term, the risk is quite high in the medium term and would have the greatest impact on the recovery: while many countries managed to cushion the economic
blow of the pandemic through various means, they have not adapted their economies to face another such risk. Another pandemic could therefore see a repetition of 2020.

While energy price fluctuations have occurred in the past, the current situation is exceptional: the sustained increase that marked 2021 has been followed by the Russian invasion of Ukraine, adding significant pressures to the EU economy. Moreover, the increase in prices as a result of the conflict does not apply only to the energy sector, but has also grown to cover fertilisers and foodstuffs. Another important element in this context is that price rises affect low and lower-middle-income households more acutely, as they must spend significantly higher shares of their income on energy. This could loosen social cohesion, adding to the existing pressures caused by the Covid-19 pandemic.

Regarding social unrest, recent research has shown that major unrest events are followed by a one percentage point reduction in GDP six quarters after the event. Moreover, unrest motivated by socioeconomic factors is associated with sharper GDP contractions than unrest associated with political motives. However, even a less dramatic unrest event could damage economic sentiment and weigh on the recovery.

The 'zombification' of the economy is also of great concern because it can lead to a drop in productivity through two channels. One is through credit misallocation, as keeping such companies ‘alive' reduces total productivity. Another is via a ‘crowding-out effect'. In this case, banks would loan to zombie companies instead of high-productivity companies. Loans to zombie companies could also increase existing strains on banks and the financial system more generally.

While monetary policy should normalise in the medium-term, a faster-than-anticipated response could lead to a tightening of financial conditions. This would deprive the EU economy of a much-needed pillar supporting its economic recovery.

Similarly, a too fast and sudden tightening of fiscal policies could not only deprive Member States’ economies of crucial and timely economic stimulus, but could lead Member States to prioritise investments in other sectors than the ones needed to secure economic growth (research and development (R&D), education, health).

Regarding the distribution of Next Generation EU funds, the general risk is that a significant volume of funds could be wasted. More specifically, investment in crucial sectors – not only for the short-term recovery, but also for the medium-term reorientation of Member States’ economies – might be postponed or abandoned altogether, leading to lower-for-longer growth rates.

On trade, retaliation by trading partners or the prospect of further escalation risk slowing trade and investment. On technology, the ongoing decoupling is loosening the current ties between the US, the EU and China. This implies complications in global supply chains, extra investment needed to fill new gaps, and loss of investment that is no longer of use. This, in turn, could weigh on productivity growth.

Lastly, climate change could lead to cross-border migration pressures, financial stresses (including among creditors and insurers in countries not directly impacted by a given event), and rising health care burdens. Such factors could also potentially constitute obstacles to a robust recovery.

**WHAT NEXT? – Impact on the EU**

To be ready for more transmissible or deadlier SARS-CoV-2 variants, it is necessary to continue and expand the sharing of doses through the COVAX Facility and share know-how. To prepare for a future pandemic, it will also be key to improve surveillance and, as a result, reporting at national, EU and international levels. This will involve the national, EU and international agencies in place, and emergency management systems and response networks. At EU level, the coordination of efforts to respond to a pandemic (e.g. procurement) must be improved, and there must be more investment...
in science (vaccines), health (hospital systems) and education (i.e. to dispel myths and disinformation).

When it comes to **rising energy prices**, Member States should take measures to mitigate the impact on the most vulnerable households and companies (e.g. emergency income support and preventing people from being cut off). Such measures could include lower taxation on energy or a reduced rate for the supply of electricity and natural gas for a short period of time. To this end, in October 2021 the Commission adopted an 'Energy Prices Toolbox'. At EU level, these measures could be complemented by measures to increase market monitoring and enforcement, so as to avoid possible market manipulation or distortions of competition. In the short-to-medium term, another very important element of the EU response must be the redirection of its supply, so as to reduce its reliance on Russian oil and gas. To meet these challenges, in March 2022 the European Commission outlined a plan to respond to rising energy prices in Europe, to replenish gas stocks for next winter and, in the medium term, to make Europe independent from Russian fossil fuels.

To prevent or tackle **social unrest**, Member States should use existing social safety nets as far as possible (supported at EU level by instruments such as SURE) and try to lessen the widening divide between economic classes. In the context of Next Generation EU, they should use the funds prudently, investing in education and health, which are key to a prosperous society.

To tackle **zombification**, credit guarantees and subsidies put in place during the pandemic should be fine-tuned, so that funds go to viable companies with liquidity problems and not to zombies. Moreover, going forward, current measures should be more targeted, others be phased out smoothly and, in general, should be accompanied by measures that promote the use of equity instruments, so as to reduce the overall leverage of companies. Supervisory authorities need to ensure that banks maintain sound capital positions and that they provide adequately for loan losses on a forward-looking basis, as doing so will remove the incentive for banks to hold on to (roll over) these loans. Lastly, the efficiency of Member States’ insolvency frameworks and bankruptcy laws must be improved, as incentives to ‘extend and pretend’ are stronger in economies with weak insolvency frameworks. At EU level, another welcome action would be to further deepen harmonisation of insololvency frameworks across countries, as envisaged by the recent **capital markets union** action plan.

While the ECB should eventually normalise its **monetary policy**, so as to have tools at its disposal when the next crisis arises, it should do so gradually, fully utilising its forward guidance and complementing it with ambitious, targeted and coordinated fiscal policies.

On **fiscal rules**, structural reforms engaged before the pandemic must be pursued and/or completed to improve the resilience of the Member States’ economies. Also, investments and reforms in core areas (health, education, R&D) should be a priority for national executives.

Regarding the distribution of the funds available under the **Next Generation EU** instrument, it is very important to increase the funding and staffing of the Commission, OLAF, the EPPO and the ECA, so that these institutions are able to audit and verify the relevant amounts under the instrument correctly.

With regard to **trade and technology** tensions, the EU should take financial or trade measures to insulate itself from the US-China conflict. It should also use its trade and economic clout to support the current rules-based multilateral trading system. Furthermore, it could enhance multilateral cooperation on tackling non-tariff barriers (e.g. technical barriers to trade) affecting EU exports.

Concerning **climate change**, the EU should take bold steps and promote its solutions, including the currently debated carbon border adjustment mechanism. In addition, it could expand the work of the European Investment Bank in providing financing to fight climate change. It could also step up its efforts in international forums to address climate change.
WHAT IF? – Two possible scenarios

**Short-term, controllable risks**

The first scenario groups risks over which the EU has the most control and that might affect its economy in the immediate future (up to three years). These risks include a faster-than-expected tightening of monetary or fiscal policies, the zombification of the economy and mishandling (or fraud) in the distribution of NGEU funds. This scenario could involve an economic and sovereign debt crisis similar to that experienced by the EU in the last decade. Discussing and agreeing on how to tackle those challenges should therefore constitute a priority in the short term. The difficulty that the EU will face in tackling those risks lies in the fact that, in a Union of 27 Member States, the economies are at different levels, facing different urgent needs, making it difficult to reach a consensus on how those risks should be handled. For example, whether Member States want to tighten their fiscal policies more quickly or slowly is not only dependent on pure economics but may also result from political considerations. Similarly, while some Member States may want to eradicate zombification from their economies, to increase foreign investment in their banks and non-financial companies, others may want to allow some degree of zombification, to avoid unemployment and social unrest.

**Medium term, less control, high impact**

This second scenario includes risks over which the EU has less immediate control. These include the war in Ukraine, rising energy prices, trade and technology tensions, social unrest, another pandemic and climate change. Such a scenario could involve a repetition of the economic shock of 2020, but could also be greater than this, if de-globalisation and climate impact whole regions adversely, forcing the geographical reorganisation of countries’ economies. These risks cannot simply be addressed with quick actions, but instead necessitate structural changes in the EU model so as to achieve strategic autonomy (see, for example, the commitment to reduce reliance on Russian oil and gas in the Versailles summit conclusions). An additional factor complicating the situation is that, for the above risks, the EU cannot simply take the necessary measures itself, but must also convince the US and China to take similar action. While the EU showed extraordinary unity and resolve in its response to the invasion of Ukraine, it has still not achieved its potential with regard to other aforementioned risks.

**Figure 13 – Charting the impact of an economic stall on four key factors**

[Diagram showing the impact of an economic stall on four key factors: Wealth, Societal, Twin transition, EU in the world. The diagram includes dots representing major, moderate, and minor impacts.]
Semiconductor supply chain disruption

WHAT? – State of play

The Covid-19 pandemic has revealed long-standing vulnerabilities in global supply chains. In particular, the semiconductor supply chain – the backbone of the global digital economy – has been affected by unprecedented shortages since late 2020, impacting negatively on large parts of the tech industry and slowing the pace of recovery. Also known as '(micro)chips', semiconductors are one of the few ‘general purpose technologies’. That is, like the steam engine, chips are a dramatic innovation that has opened up swathes of potential technical progress and economic growth. Importantly, chips are a dual-use technology (with both civilian and military applications). The three main categories of semiconductors include: logic chips – the ‘brains’ of electronic devices, executing complex computing operations; memory chips, storing information; and discrete, analog and other chips (DAO), such as voltage regulators or optical sensors. Advances in chip manufacturing process technology are typically described as ‘nodes’ – referring to the size in nanometres (nm) of the transistor gates (the key components of chips). The most advanced chips are based on the smallest nodes (below 10 nm) and consist of tens of billions of transistors. There are usually multiple semiconductors implanted on the printed circuit board of any electronic device. Used in an impressive range of products, from computers to medical devices, in 5G and artificial intelligence (AI) systems, and in security and defence devices, chips have become ubiquitous. They determine the characteristics of the products into which they are embedded, including their energy performance and security features. Global demand for semiconductors by end use experienced large shifts in 2020, due to the pandemic, with computers ranking first (32 % of demand), followed by communications (31 %); consumer goods (12 %); industrial applications (12 %); the automotive sector (12 %); and government, including military applications (1 %).

At the beginning of the pandemic, the car industry anticipated plunging sales and cancelled orders for chips (modern cars can incorporate hundreds of semiconductors – up to 3 500 for hybrid electric cars). At the same time, chipmakers shifted their production lines away from automotive-grade chips, to meet increasing demand for chips used in laptop computers, webcams, tablets and smartphones, stirred by the rapid shift to a work-from-home economy resulting from Covid-19 related lockdowns. Businesses also upgraded their digital infrastructure to handle online meetings and employees working from home, and telecommunications companies invested in broadband infrastructure. Rather unexpectedly, car sales bounced back fast at the end of 2020. A number of extreme weather events also affected supply: a winter storm in Texas in February 2021, severe drought in Taiwan in April 2021, Fires at a factory in Taiwan in October 2020 and February 2021, and at a plant in Japan in March 2021 interrupted supply, as well as Covid-19 clusters leading to factory closures, such as in Malaysia in September 2021. Vehicle supply issues caused by the semiconductor shortage were estimated to cost the global automotive industry about US$210 billion in 2021, and shortages are expected to force carmakers to scale back their production plans in 2022. Total production losses are expected to reach 7.7 million vehicles. At the beginning of 2021, the impact of the semiconductor shortage had spread across the global economy, affecting the home appliance, network equipment, smartphone, tablet and computer and gaming console sectors, among others. These shortages have led, inter alia, to rising costs for industry and prices for consumers, and have slowed the pace of recovery in Europe. The chip shortages, which have largely concerned chips often referred to as ‘lagging edge’ (or ‘legacy’) chips (those based on technologies developed more than a decade ago) are likely to continue, at least into 2022 or even into 2024, as most solutions to the shortage have long lead times. Furthermore, even though chip manufacturers’ capital expenditure has increased recently and is expected to reach US$146 billion in 2021 (+33 % and +50 % compared with 2020 and 2019 respectively), only US$1 in every US$6 will be invested in the segments that have faced the most significant backlogs.
SO WHAT? – Risk factors involved

The extreme complexity of the global supply chain, due to geographic concentration and specialisation, the interdependence of the actors involved, and the industry's capital-intensive nature (a barrier to entry in the sector), exposes it to a wide range of potential disruptions.

Manufacturing chips involves three main steps: chip design; production (in ‘foundries’ or ‘fabs’), the most capital-intensive stage (a fab for advanced logic and memory chips costs around US$20 billion); and final assembly, testing and packaging, the most labour intensive stage. The supply chain also relies on around 300 inputs (such as ultra-pure silicon wafers), as well as on more than 50 classes of high-tech manufacturing equipment. In total, the production of a chip involves more than 1 000 steps, crossing international borders 70 times before reaching an end customer. A large semiconductor firm may rely on as many as 16 000 suppliers worldwide. The global supply chain comprises more than 50 choke points – steps where one region holds more than 65 % of the global market share. These features make the supply chain vulnerable to large-scale supply disruption caused by natural disasters, accidents, infrastructure failures, sanitary crises, cyberattacks and geopolitical tensions (due to the imposition of tariffs, export controls, or blockages resulting from embargoes or armed conflicts). Of the world’s fabrication capacity for cutting-edge chips, 92 % is based in Taiwan. Of the world’s top 35 semiconductor companies, only four are based in Europe. In 2020, companies based in the United States held 47 % of the global chips market, those based in South Korea 20 %, in Japan 10 %, in the EU 10 %, in Taiwan 7 % and in China 5 %. Importantly, no country or region has achieved self-sufficiency in the sector. Full autonomy is largely considered to be beyond reach for all regions, at least in the short to medium term.

Almost 75 % of the global installed capacity is located in Asia (China, Japan, South Korea and Taiwan), which is particularly exposed to high seismic activity and geopolitical tensions. A large number of disruptions have already occurred in the global supply chain over the past 30 years (such as a 1999 earthquake in Taiwan and in Japan in 2011). For advanced technologies (the leading 7 nm and 5 nm nodes), 100 % of global capacity is based in East Asia (Taiwan and South Korea). Only two companies, TSMC (Taiwan) and Samsung (South Korea) are able to manufacture chips at 5 nm and the global economy relies on Taiwan for 92 % of the production of these chips.

WHAT NEXT? – Impact on the EU

Given the importance of semiconductors, the fragility of their supply chain potentially puts every sector of the European economy at risk of disruption, threatening the EU’s ability to reap the benefits of the digital transition and to ensure its digital sovereignty. The loss of a solid industrial base in the sector would in particular jeopardise the EU’s innovation capacity, and have negative effects on the entire EU chip ecosystem; once lost, such an ecosystem would be difficult to rebuild. Beyond the economic impact of disruption to EU chip supply, the EU’s defence sector could also be severely weakened, as chips are widely used in defence equipment.

The European semiconductor ecosystem supports around 200 000 jobs directly, and up to 1 000 000 related jobs in systems, applications and services in Europe. The development and production of semiconductor components in the EU is concentrated mainly in Germany, France, Italy, the Netherlands, Austria, Belgium and Ireland. EU companies are particularly active in the automotive, industrial automation, security and healthcare sectors, as well as aeronautics, energy production and telecommunications. The EU has notable weaknesses in design and design automation tools. All vendors of the software used to design chips are based in the United States. Moreover, most companies active in assembly, packaging and testing are based in Asia.
Targeted measures are needed to make the supply chain more stable and resilient, secure technological advances and foster economic growth. EU policies to support the semiconductors sector have remained modest in recent years. Stressing the urgent need to act, the European Commission adopted a 'European chips act package' on 8 February 2022, focused on the strategic objective of increasing the resilience of the EU's semiconductor ecosystem and growing its global market share. The EU's competitors have engaged in a 'subsidy race' and have given their chip sectors massive support. For instance, in the United States, the White House estimated that Chinese government support for its domestic industry for 2015-2025 could be as high as US$200 billion. The US government is responding by planning investments of US$52 billion in the industry. Furthermore, the EU can be viewed as less agile than its competitors, because of its decision-making framework, which differs depending on the policy area and involves coordinating actions at national and EU levels. The Commission has proposed that, by 2030, the EU market share in the production of cutting-edge semiconductors (below 5 nm nodes, aiming at 2 nm) should be at least 20% of world production in value. Taking account of the projected chips market size of US$1 trillion by 2030, the EU would have to increase its annual sales by a factor of 4 or 5 to achieve this goal.

The magnitude of the task is daunting. For instance, it would take at least three years and US$350 billion in investment to build enough capacity in the rest of the world to replace the Taiwanese foundries in the event of disruption. Even the United States, a world leader in the sector, recognises it cannot address its vulnerabilities alone and that international cooperation with allies is necessary. Furthermore, as the global market is expected to grow, the EU's market share will fall if it does not increase production: for 2022, the global semiconductor market is projected to grow by
8.8% to US$573 billion and, as mentioned above, is expected to reach US$1 trillion by 2030. Over the next 10 years, the industry will need to invest about US$3 trillion in research and development (R&D) and capital expenditure globally, across the value chain, to meet the increasing demand.

WHAT IF? – Possible scenarios

_Dwarf: EU marginalised and vulnerable by doing too little, too late and/or being ineffective_

Despite some action taken at both EU and national levels, the EU is dwarfed by its competitors and plays a minor role in the global chip supply chain. The EU could still keep some strengths in the chain in some niche markets, but would be unable to secure its chip supply and would remain highly vulnerable to the threats described above. The EU’s digital transition and digital security would be severely compromised.

This scenario may materialise if the EU is unable to implement specific measures. Furthermore, this scenario may possibly unfold if the EU implements a number of measures to improve its strengths in the supply chain, but fails on account of doing too little, too late. Faced with the rapid developments expected in the global semiconductor supply chain, the EU’s position would not improve. At best, it remains the same, in a growing global market.

In this scenario, the EU would still be able to ‘free ride’ on cheap chips, as other countries are expected to subsidise the sector heavily (as explained above), but would remain highly vulnerable to disruption in the sector or political pressures.

_Altar ego: EU leading and autonomous as a result of successful action_

In this scenario, the EU becomes one of the world leaders in the chip supply chain, holding strong positions in several key stages in the global supply chain. This would result from strong, adequate measures to improve EU capacity and resilience in the supply chain, enabling it to respond promptly and effectively to any contingency. If carried out on an appropriate scale and well-targeted, the following measures, have the capacity to strengthen the EU’s role and resilience in the global semiconductor value chain:

- investing in R&D to maintain and improve expertise in the EU, in particular positioning Europe in emerging critical technologies or taking the ‘more than Moore’ approach;
- supporting the whole EU manufacturing ecosystem, including upstream and downstream industries;
- encouraging foreign foundries and materials suppliers to invest in the EU;
- protecting European companies from foreign takeovers and technology transfers, using export controls in specific cases;
- promoting the diversification of suppliers (i.e. creating supply chain redundancies, both geographically and in terms of companies);
- securing the availability of a highly skilled and specialised workforce;
- promoting international collaboration (e.g. World Trade Organization, G20), including to set international standards, and encouraging the creation of monitoring, due diligence systems and early warning mechanisms with respect to the state of the supply chain;
- encouraging stockpiling to mitigate short-term supply interruptions; and
- addressing potential environmental issues linked with semiconductor production, which uses vast amounts of water, energy and chemicals.

A strategy to achieve full independence from foreign inputs in the sector seems unrealistic. A scenario of fully ‘self-sufficient’ producing regions would require US$900 to US$1.225 trillion in upfront investment (around €766.5 to €1.043 billion) in total, to cover each region’s 2019 consumption levels. Furthermore, the industry would incur US$45 to US$125 billion (€38 to €106.5 billion) in incremental recurrent annual operational costs. Semiconductor prices would
increase by 35 to 65%. For Europe specifically, the upfront investment to achieve self-sufficiency would amount to **US$240 to US$330 billion** (€204 to €281 billion), with incremental recurrent annual operational costs at US$25-60 billion (€21-51 billion).

**Figure 15 – Charting the impact of the 'dwarf' scenario on four key factors**

![Chart](chart.png)

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Growing democratic fragility

WHAT? – State of play
Several indicators illustrate a global decline in democracy and a rise in authoritarianism (Varieties of Democracy VDEM, IDEA International, Freedom House, Economist Intelligence Unit). This trend has not spared established and prosperous democracies, including members of the Organisation for Economic Co-operation and Development (OECD). On all five governance indicators analysed by the World Bank (Figure 16), high-income OECD countries (including 22 high-income European Union Member States) recorded a slight regression in 2020 compared with 2015 and 2010. This democratic backsliding affects several EU countries, particularly Member States such as Hungary and Poland.

Figure 16 – Worldwide governance indicators in high-income OECD countries

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Country</th>
<th>Year</th>
<th>Percentile Rank (0 to 100)</th>
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<tbody>
<tr>
<td>Voice and Accountability</td>
<td>High income</td>
<td>2010</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2015</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2020</td>
<td></td>
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<tr>
<td>Political Stability and Absence of Violence/Terrorism</td>
<td>High income</td>
<td>2010</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2015</td>
<td></td>
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<td></td>
<td></td>
<td>2020</td>
<td></td>
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<tr>
<td>Government Effectiveness</td>
<td>High income</td>
<td>2010</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2015</td>
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<td></td>
<td></td>
<td>2020</td>
<td></td>
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<tr>
<td>Regulatory Quality</td>
<td>High income</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2015</td>
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<td></td>
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<td>2020</td>
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<tr>
<td>Rule of Law</td>
<td>High income</td>
<td>2010</td>
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<tr>
<td></td>
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<tr>
<td>Control of Corruption</td>
<td>High income</td>
<td>2010</td>
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<td></td>
<td>2015</td>
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The rule of law – under which governments may act only within the limit of the law, and legislatures may enact laws only within the limits set by the constitution, including on fundamental rights – has been, at least since the end of World War II, part and parcel of a Western understanding of democracy. The EU is founded on the joint values of freedom and dignity, democracy, rule of law, and fundamental rights, equality and protection of minorities. All EU Member States and candidate countries must commit to the values of rule of law, fundamental rights and non-discrimination that are at the core of the European understanding of democracy.

SO WHAT? – Risk factors involved
Rule of law: In recent years, there have been attempts to undermine democracy, fundamental rights, equality and the rule of law in certain Member States. This is evidenced chiefly through bids to cancel judicial independence and subject the judiciary to the political influence of the executive and legislative branches, control the media, influence elections, target minority groups and civil society organisations, favour oligarchs, allow corruption, and to entrench the power of a political party on the state.

Risks to the integrity of the electoral process: As recent United States elections have shown (2000, 2020), long-standing liberal democracies are not immune to the kind of electoral crises more
commonly seen in weaker democracies: accusations of fraud and disregard for the judicial process made by major political players, and post-electoral violence. While the USA remains an exception in this respect among developed democracies, others are not free of risk. Their wealth predisposes developed democracies to another major risk: money bias in politics. There is a great variation in the level of safeguards adopted, with the United States showing a liberal attitude in favour of wealthy donors, following the Supreme Court decision in Citizens United v FEC. Stronger safeguards against donations by corporate interests to political causes exist in EU countries, but these remain a concern, including at EU level.

**Media freedom on the decline:** While the media are considered a fundamental pillar of democracy and the rule of law, both public and private media are often used and abused for political campaigns and propaganda. Furthermore, their digital transformation has had a profound impact on democratic politics. The disappearance of numerous newspapers, many of them local, has undermined civic engagement and political participation. The spread of social media and online news sources has made information more accessible, but has also contributed to the dissemination of fake news and disinformation. Meanwhile, there is a risk that measures to counter disinformation unnecessarily restrict freedom of expression. Increasing attacks and intimidation against journalists, traditionally considered to occur in authoritarian regimes, are also affecting developed democracies, often provoked and encouraged by populist or corrupt politicians.

**Dissatisfaction with democracy** has reached record levels in developed countries, with lack of trust in government a related phenomenon (but again, there are great variations among developed democracies: in Chile only 17 % of the population trusted their government in 2020, whereas 85 % of the Swiss trusted theirs). Voter apathy (low turnout rates) is another risk factor, but one that affects developed democracies to varying degrees. Lack of public participation in the political process, such as in developing legislation, is a similar risk affecting developed democracies differently. Japan, otherwise a country with a very stable political system and less affected by the challenges facing other democracies, ranks towards the bottom on both these counts (voter turnout and developing regulation), and this civic apathy impacts its democratic vitality. Conversely, strong political polarisation, as seen in the USA, can have an equally harmful impact on the democratic process, weakening the chances of finding a consensus in decision-making.

The weakening of some fundamental rights (such as for various minorities) under populist pressure affects the inclusion of certain groups in the political process. Traditionally marginalised and discriminated groups such as women, LGBTIQ+ persons, or persons with an immigrant background have seen hard-won progress on their rights receding once more.

**Foreign interference is another major challenge:** Authoritarian state and non-state actors have been deploying a range of overt and covert instruments to destabilise democratic societies, including propaganda, electoral interference, and using their own citizens based in developed democracies or migrants used in hybrid wars.

**Failure to prioritise democratic values in external policies:** After the most recent failure to establish democracy in Afghanistan, but also after other failed transitions in the Middle East and North Africa, there is a risk that developed democracies will turn away from promoting democracy externally, amplifying existing failures in this respect. Disagreements between democracies, such as those caused by Brexit or by the AUKUS pact, and the difficulties in agreeing common approaches to major crises such as Russia’s aggression in Ukraine, also threaten to weaken their influence in the world and their capacity to take common positions against assertive authoritarian powers.

**WHAT NEXT? – Impact on the EU**

As a union of liberal democracies, committed to the preservation of democratic norms at European and national level, the EU has not remained unaffected by the erosion of democratic standards. The reaffirmation of national sovereignty by populist leaders comes at the expense of EU norms and
decision-making mechanisms. Illiberal developments in EU states inspire others beyond EU borders and vice versa. Attempts to undermine the rule of law not only question the fundamental, legally binding values underpinning the European project, but also jeopardise the functioning of the internal market, the EU’s financial interests and mutual trust between the judicial systems of the Member States, especially in sensitive areas such as the European Arrest Warrant.

The possible decline of democracy in other major democracies involves considerable risks for the EU, such as foreign interference from illiberal groups, funding for illiberal causes, or hostile attitudes towards the EU from important political leaders (such as from former US President Donald Trump).

Irrespective of the state of democracy at home, a faltering commitment on the part of developed democracies to promote democracy in third countries (most recently witnessed in the withdrawal from Afghanistan) can take a toll on the EU’s capacity to conduct such policies. Declining democracy, whether in EU countries or in important partners such as Turkey, makes it more difficult for the EU to find common and effective approaches to Russia or China. Another democratic backlash in the USA could endanger the functioning of the multilateral system, leaving the EU without a major ally in defending multilateralism.

WHAT IF? – Three possible scenarios

Of the various scenarios for the future of democracy, some are more optimistic, some more pessimistic. One hypothetical possibility is the complete collapse of democratic regimes and their transformation into authoritarian regimes, including in major consolidated democracies (whether in North America or Europe), but this remains unlikely. The scenarios outlined below exclude this possibility and work instead with the concept of constitutional populism, which assumes sufficient respect for constitutional rules.

**Democracy reinvents itself**

Recognition of their own imperfections is one of democracies’ major advantages, as it can inspire change. One hopeful scenario is that democratic systems can be redesigned to improve their resilience. This renewal, which some authors conceptualise as a new social contract, could allow them to respond better to citizens’ political, economic and social expectations, restoring their most important traditional strengths – to deliver shared prosperity and internal and external peace and security. It could also strengthen their soft power in the world. It includes new experiments with citizen assemblies and juries, as well as using digital means to extend citizens’ participation. These can be complemented by referendums at local level. This renewal applies, mutatis mutandis, to the rule of law, which – as a value central to the modern understanding of democracy – must be protected alongside fundamental rights in order to safeguard the very essence of a democratic system of government. Possible aspects of the ‘reinvention’ of the rule of law could encompass greater transparency in judicial appointments, enhanced amici curiae (society and interest representatives) participation in judicial proceedings, and stronger emphasis on the concrete societal effects of doing justice in politically high-profile cases (e.g. concerning the environment, climate change or consumer protection).

**Populists’ political success is transitory, but it leaves a political legacy**

In this scenario, existing safeguards and a strong political culture could prevent illiberal forces from overturning democracies into dictatorships. The erosion of democracy thus remains a transitory phenomenon that relates to the window of opportunity created by the need to address sensitive issues such as the loss of jobs due to globalisation, irregular migration, or internal and external security issues (although some authors deny that these are the true roots of populism). In this scenario, populists vanish or remain a minor political force because they tarnish their image with anti-democratic actions. Putin’s war against Ukraine is seems to be weakening populists due to their previous ties with the Russian dictator. Aspects of their political agenda however endure, because liberal forces take over some core items, albeit ideally tackling them more in line with liberal values.
This can already be witnessed in the USA, where some major policy turns made by the Trump Administration (such as on trade and foreign interventionism) remain in place. Most importantly, populism’s impact on democracy may not durably damage the rule of law, based on the assumption that judicial independence, democratic checks and balances, the State and society at large, could be resilient enough to endure the challenges posed by neo-authoritarian tendencies. In foreign relations, more sovereigntist and protectionist policy objectives will become part of mainstream politics, without undermining the commitment to multilateral norms and institutions.

**Confrontation between liberals and populists becomes the new normal**

In this scenario, political polarisation is here to stay, being inherent to democracies, and populism is one of its unavoidable poles. After the polarisation around Covid-19 vaccines, anger over rising energy prices – whether due to sanctions against Russia or the need for green policies – could provide fuel for the next generation of populists, along the lines of the gilets jaunes. Concerning the rule of law, this third scenario would mean that struggles to uphold judicial independence vis-à-vis the legislative and executive would become the ‘new normal’, possibly providing for periods of government domination over the judiciary and an erosion of the rule of law, followed by periods of democratic and rule of law progress.

**Figure 17 – Charting the impact of the ‘confrontation’ scenario on four key factors**

![Figure 17](chart.png)

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Collapse of the internet

Over the last three decades, the internet has evolved from a niche technology used primarily for research and military purposes into a critical public service on which many personal, civic, commercial and professional activities depend. What then is the risk of internet failure? While the risk of a total global collapse is extremely low, there are some local nuances, and possibilities for major disruption. Three aspects could prove critical: technical infrastructure, service provision and user engagement. Without technical infrastructure there can be no services and without user engagement those services cannot contribute to society. Yet dependence creates vulnerability.

SO WHAT? – State of play

What is referred to as ‘the internet’ is not a single space but a network of networks, with elements distributed across a constellation of billions of devices. The connections between these devices are provided by a sprawling infrastructure that permeates our environment, from intercontinental submarine cables lying 8 km below sea level to satellites orbiting 35 000 km up in space. The networked space is in constant flux as servers, computers, sensors, mobile devices and all manner of contraptions are connected and disconnected. A vast range of services is provided through the network, including websites, emails, voice and video communications, media products, and specialist platforms. Most human activities engage these services in some way, and many depend substantially upon them.

SO WHAT? – Risk factors involved

The technical infrastructure of the internet has been characterised by a distributed structure since the early stages of its development. The advantage of such a distributed design is that there is no single central point upon which the whole network relies. Data can be routed over the network via many different pathways. If one fails, there are usually several viable alternatives. There is also a substantial degree of redundancy with many servers duplicated at several different locations, so that if one is disconnected others can take over.

However, the internet architecture is not entirely decentralised. Many subnetworks have a centralised architecture that represents a single point of failure for the devices that use it. For example, all of the devices within organisations or households may depend upon the functioning of a central Wi-Fi router or server, and entire regions may depend on a single data exchange.

The organisation of online services is also distributed. This was not determined by the distributed technical infrastructure, but was a deliberate design choice. In fact, until the 1990s, the most successful online network was the French Minitel, which restricted online services to those authorised by its central authority. In contrast, today’s internet

Figure 18 – The internet’s distributed technical infrastructure provides resilience to failure

Source: Matt Britt, Internet map 4096, CC BY 2.5.
adopts the ‘end-to-end principle’, which allows anyone to both access and host services on the network. In the early days of the internet, this created good conditions for innovation and competition, key factors in the internet’s resilience to failure as well as its flourishing from the 1990s. Nonetheless, the organisation of services on the contemporary internet is not entirely decentralised either. Some key elements are centralised for reasons of coherence and interoperability. For example, the Internet Corporation for Assigned Names and Numbers (ICANN) governs the internet’s domain name system (DNS), which is crucial for ensuring the functionality of web addresses. While there are contingencies in place, this represents a point of potential failure and may also be subject to geopolitical interventions. There are also elements of centralisation via state regulation of internet services within specific regions. This takes place everywhere, including the EU, for reasons ranging from restrictions on illegal content and non-competitive market activities to state control and censorship. Non-competitive markets can also drive the centralisation of online services. Reliance on a few dominant providers for searches, shopping, communication and social media, for example, may represent a vulnerability as interruptions to their services – which can be caused by technical failures, commercial or policy developments or breakdowns in users’ trust and confidence – can provoke widespread disruption with few viable alternatives in a position to take over.

The technical infrastructure and online services are necessary but not sufficient conditions for the internet’s functionality. Its contribution to productivity, efficiency, knowledge and communication in our personal, civic and professional lives also depends upon the quantity and quality of user engagement. In the 1990s, this contribution depended largely upon the number of individuals and organisations ready to use websites and email. By the 2000s, growth was driven by willingness to embrace online shopping and services such as e-banking and e-public administration. During the last decade, user enthusiasm has propelled a new generation of applications and platforms for communication, e-commerce and connected devices, fuelling new trends in the commodification of data. Each wave has built upon the previous one and depended on the trust and confidence of users just as much as the functioning architecture and service availability. Threats to users’ trust and confidence, therefore, are also threats to the realisation of the potential benefits of online services today and in the future.

WHAT NEXT? – Impact on the EU

The impacts associated with internet failure in any of the three dimensions of technical infrastructure, service provision and user engagement are difficult to predict. However, the type of impact may be characterised according to the type of failure, often depending on the scale and duration of the disruption and the degree of reliance on the services affected.

In the case of interruptions to the basic infrastructure, users directly affected would be unable to access any online services. A global failure that cut the internet for all users worldwide would have a major impact on many essential offline services. It has been estimated that an EU blackout would cost around €6 billion per day. However, as a result of the internet’s distributed architecture, technical failures only tend to affect users in close proximity to the fault. When it is highly localised – in a building or street – many users will have recourse to alternatives, such as mobile internet, until the problem is fixed. Globally, most users are largely unaffected by localised outages, although any service that depends entirely upon the affected area may be inaccessible to all users. As such, technical failures are unlikely to lead to a total global internet collapse.

Nonetheless, users that depend upon internet services for their work, mobility, communications, shopping and entertainment may find brief failures of hours or even minutes to be highly disruptive. On the other hand, those that are less dependent could easily revert to offline and analogue services, and might even benefit from a short blackout if the time is used effectively. However, substantial interruptions lasting days or weeks would likely develop into structural crises as failures in communication and information systems would make it difficult to coordinate adequate responses to impacts upon supply chains, utilities and other critical services.
In principle, failures of specific online services would affect only the users of the specific service, and the impact would be limited to those activities that rely upon it and do not have adequate alternatives. Interruptions to core services such as payment processing could have an immense impact on several other activities such as shopping and transport. For other services such as third party reservation systems, near equivalent alternatives on the market could pick up the mantle. Users of unaffected services would, at worst, experience rebound effects, such as slower traffic as directly affected users migrate, causing spikes in traffic.

In contrast to email and telephone systems, which allow all users to interact regardless of which specific provider they use, social media platforms tend to restrict direct interaction with other services. This fosters dependency upon a single point of failure and is exacerbated by dominant market positions and high barriers for users to leave or change platform. In addition, some dominant platforms have expanded by providing login services for third parties. These vulnerabilities were well-illustrated by the October 2021 interruption to all Facebook services, including WhatsApp, Instagram and their login facilities for third party services. While the technical infrastructure remained fully functional, the failure of a single operator affected many dependent users in the same way as a global internet blackout would.

The breadth and depth of internet services depends upon the quantity and quality of user engagement with it, so reduced user activity could have a substantial impact on its functioning and value. Willingness to engage is complex and difficult to measure, but users may reduce their online activities such as shopping or social media use in response to negative personal experiences, repeated controversies, or as part of a broader 'techlash' trend. While newfound hesitancy could present a risk to today's internet services, the risk is most often identified in the context of future innovation paths. For example, the prospective benefits of artificial intelligence in Europe are widely understood to be contingent upon citizens' trust and businesses' confidence.

**WHAT IF? – Three possible scenarios**

Several possible scenarios could illustrate a collapse of the internet or its services. Those presented below were selected to highlight the diversity of these risks. Each focuses on a different dimension of vulnerability: the infrastructure, the services offered through it, and user engagement. While the internet is unlikely to face an immediate existential risk, elements of all three scenarios already limit its full potential and could develop into serious threats to its functionality and value.

**Collapse of basic infrastructure**

The most literal risk scenarios for internet collapse involve total failures in the technical infrastructure. While there are some plausible scenarios for global blackouts caused by solar winds or a massive coordinated military attack, the distributed design of the internet architecture provides substantial built-in resilience to most threats, making a total and sustained global collapse highly unlikely. Nonetheless, there remains a substantial risk of temporary and geographically limited disruption to connectivity. Just as a broken telephone cable can cut household connectivity, faults in local data exchanges can disconnect entire neighbourhoods. In 2011, Armenia lost all internet connectivity for five hours when a citizen accidentally cut an underground cable with a spade. The 39 000 km undersea cable SEA-ME-WE3 – which runs from Germany to Jakarta via the Suez Canal before branching off to Australia and Japan – suffers regular faults due to contact with the seafloor or ship anchors, resulting in slower connections to large regions as network traffic needs to be rerouted until the cable can be repaired. During the Russian invasion of the Ukraine in 2022, internet provision was disrupted but not, at the time of writing, entirely blocked. While incidents of this kind are disruptive, the ability to avoid total collapse even when major arteries are severed is testament to the overall resilience of the internet's technical infrastructure.

These risks can be mitigated by further diversification of the technical infrastructure and reducing critical dependencies, for example on satellites or the electricity grid. Strategies should be prepared
and reviewed for providing essential services in the event of internet blackouts, and for quickly re-establishing connections. Key EU initiatives include the EU space-based global secure communication system, the Connecting Europe Facility, the 'next generation internet' initiative and the High Level Group on Internet Governance.

**Availability of online services**

An major threat to specific online services is disruption by spikes in traffic. These spikes may be legitimate, for example when a major incident provokes many users to access the same servers at one time. More often, however, they are malicious attacks whereby servers are overwhelmed by spurious requests designed to disrupt the service. Attacks may be motivated by hackers' desire to prove their capabilities or for the purpose of activism, blackmail or revenge. They can affect performance and lead to data loss and service outages; they rank high in ENISA's threat landscape for both their current impact and the potential future threat they pose.

Taking a broader view, there is also a threat of fragmentation in the availability of online services, which may be driven by commercial interests or policy choices. Already a decade ago, The Economist referred to the 'balkanisation' or 'splintering' of the internet along political and commercial fault lines. Some jurisdictions place technical restrictions on portions of the internet, for example the 'the great firewall of China' and the Russian 'sovereign internet law'. In the EU, principles such as 'what is illegal offline should be illegal online' can lead to limitations in some internet services, and Europeans may be treated differently from others in order to comply with rules arising from the General Data Protection Regulation (GDPR), for instance. Commercially driven splintering may also occur as dominant platforms consolidate their positions. For some users, Facebook effectively is the internet. The threat of fragmentation is a substantial recentralisation of online services with innovation and consumer choice stifled by commercial or state interests, and missed opportunities for realising the internet's full potential.

Specific services can improve their resilience to these risks by maintaining strong, up to date defences against cyberattacks and by reducing dependence on third parties, for example via their login services, which may be affected by malicious or accidental disruptions. Collective resilience can be enhanced through net neutrality, interoperability and healthy, diverse markets for online services, as well as by maintaining adequate analogue and offline services in parallel to online equivalents. Key EU policies include the Open Internet Access Regulation, the EU cybersecurity strategy and the rolling plan for ICT standardisation, as well as the proposed digital markets act (DMA), digital services act (DSA), data governance act and European digital identity framework.

**Crisis of confidence**

The internet is unable to deliver real social and economic benefits without the trust and confidence of end users. These are earned gradually but can be quickly lost through individual experiences such as exposure to fraud or hate speech, or through regular data breaches or public controversies, such as the Cambridge Analytica scandal and the Facebook files. As a small group of specific services dominate citizens' online activities, they can, for many users, be experienced as equivalent to the internet itself. A future worst-case scenario could involve, for example, massive exposure of personal data enabled by quantum enabled decryption techniques. Already today, negative experiences and controversies shape social attitudes to online services and their role in our lives, and may lead to reduced willingness to engage with them. This is also a factor in the adoption of innovations.

Nevertheless, trust and confidence could also be enhanced by ensuring that internet services are safe, fair and beneficial for all. This could include action on consumer protection, counteracting hate speech and online abuse, and ensuring all citizens have the necessary skills to prosper in the digital world. Key policy measures include the GDPR and the proposed artificial intelligence act, DMA and DSA.
Figure 19 – Charting the impact of the ‘infrastructure collapse’ scenario on four key factors

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Algorithms undermining rational political debate

WHAT? – State of play

There is mounting concern about the impact on the global information ecosystem of big online platforms’ attention-based business models. The online public space for (democratic) debate where people not only express, but also form, opinions is currently dominated by a handful of commercial tech platforms that design, employ and optimise their algorithms with a view to maximising profits, without independent oversight. Whereas some studies show only minor effects of direct and indirect personalisation in Google searches, for example, other experts warn about the potential of social media algorithms to reinforce human biases to steer people’s behaviour – including political decisions – in certain directions. As recent Facebook leaks reconfirmed, negative emotions – in particular, anger – are most efficient at generating engagement on social media.

In addition to facilitating a distorted picture of predominant opinion, the social media algorithms that benefit these companies financially tend to push users towards extremes, with potentially severe implications for the democratic debate. The Covid-19 pandemic – during which people across the globe have spent more time online while at the same time often feeling lonely, isolated and/or anxious – and the accompanying infodemic (defined by the WHO as ‘an over-abundance of information [...] that makes it hard for people to find trustworthy sources and reliable guidance when they need it’) have further accelerated the spread of conspiracy theories across the world. This has also highlighted the risks of algorithmic radicalisation, where the recommendations of YouTube and Facebook – whose algorithms are designed to keep people engaged – lead to users being exposed to more and more extreme and polarising content, a concern confirmed by the revelations of Facebook whistle-blower Frances Haugen in October 2021. The Oxford Internet Institute has found evidence of an increasing number of countries with private firms managing information manipulation campaigns, likely leading to growing competition in disinformation as a service (see Figure 20 below).

SO WHAT? – Risk factors involved

One of the EU’s overarching core interests is arguably preserving basic democratic values. Information manipulation jeopardises this cluster of interwoven interests in various ways. Most visibly, information manipulation jeopardises European citizens’ freedom to form opinions and make informed choices, including about democratic votes. Amid growing geopolitical competition, authoritarian states – most of which have been struggling to contain both the virus and public criticism during the pandemic – are seeking to shift blame and distract from their own failures. Thus, they have a special interest in fuelling anti-democratic forces and helping to undermine the credibility of democracy as a system. In this context, information manipulation techniques and campaigns turn one of democracy’s greatest assets – free and open debate – into a vulnerability.

An increasing number of state actors – including Russia – are benefiting politically from the disintermediated information sphere by using computational propaganda techniques. These include the AI-enabled harvesting of data to profile and microtarget users, algorithms and automated ‘bot’ accounts, as well as human curation by cyber troops or ‘trolls’. In addition to geographically and ideologically motivated information manipulation, growing number of companies offering ‘disinformation-as-a-service’ are expected to boost competition in this evolving lucrative sector. This can feed into the campaigns of foreign state and non-state actors to influence democratic processes and decision-making.

During the pandemic, online conspiracy theories have contributed to radicalisation and resulted in offline violence around the world. One recent example is the spread of QAnon – a meta-conspiracy theory alleging the existence of a ‘deep-state’ network, run by global elites – which provides an umbrella narrative for a wide spectrum of related sub-conspiracy theories and played a key role in...
the US Capitol insurrection on 6 January 2021. QAnon-related conspiracy theories have been exported to Latin America and Europe – including via social media platforms such as Facebook, Instagram, Twitter, YouTube and TikTok – contributing to anti-lockdown protests in the UK and Germany. While the risks of algorithmic radicalisation have become visible during the pandemic, and AI-enabled information manipulation, such as deep fakes, has already generated widespread concern, experts warn that the ‘Metaverse’ planned by Facebook/Meta will multiply the risks of the current internet, affecting people to a similar degree as real-life experiences. Moreover, this new hybrid reality would increase the reach of surveillance for profit, further threatening the protection of privacy.

**Figure 20– Countries with evidence of private firms managing information manipulation campaigns**

![Figure 20](https://example.com/figure20.png)

Data source: Oxford Internet Institute.

**WHAT NEXT? – Impact on the EU**

In a March 2020 Eurobarometer survey, 71% of respondents said they encountered disinformation several times a month or more often. A 2018 Eurobarometer poll suggested that 85% of respondents see false information as a problem in their country and 83% perceive it as a problem for democracy. At the same time, authorities across the world are under pressure to counter disinformation campaigns, including narratives intended to sow doubt about voting systems and the legitimacy of elections. This comes at a time when authoritarian actors are becoming more assertive and leading democracies have ‘turned inward’, with Freedom House diagnosing the 15th consecutive year of decline in global freedom in its *Freedom in the World 2021* report.

As already mentioned, the pandemic and subsequent restrictions amplified existing societal divisions, with conspiracy theories about the coronavirus itself and vaccines overlapping and/or confirming far-right conspiracy theories, including antisemitic narratives. Such groups have acted as gateways to extremist messaging and geopolitical disinformation. In the context of Russia’s invasion of Ukraine in February 2022, research confirmed that anti-vaccine groups had become hotbeds of pro-Russia conspiracy theories. Growing polarisation can further push users towards alternative social media platforms and encrypted services where selected voices exert increased influence over audiences that cannot be reached by efforts to debunk mis- or disinformation. This can further accelerate the fragmentation of the infosphere, help solidify separate isolated realities and exacerbate declining trust in authorities, democratic institutions and formerly respected sources of knowledge.

In 2018, the European Commission launched its action plan to counter online disinformation and worked with a number of key online platforms and advertisers to establish a self-regulatory Code of
Practice, a voluntary agreement aiming to curb disinformation and improve online policies. The Code of Practice is currently undergoing revisions in accordance with the Commission's May 2021 guidance. In parallel, the EU is moving towards regulating the digital sphere, including with the digital services act and the digital markets act, in addition to funding various research projects that aim to create a safer online space. At the same time, governments across the world are launching artificial intelligence (AI) strategies to address the transparency and accountability of algorithms. The EU launched its risk-based AI act in April 2021. In addition, the European democracy action plan, launched in December 2020, aims to protect and strengthen European democracy, including against disinformation.

As the pressure on European institutions to increase individual and societal resilience against manipulative and harmful interference continues to grow, Parliament's first temporary Special Committee on Foreign Interference, including Disinformation (INGE), in its 2022 resolution highlighted the need for a holistic EU response. It specifically called for sanctions to be imposed for disinformation campaigns, and for forcing social media platforms, which serve as vehicles for foreign interference, to stop boosting inauthentic accounts that drive the spread of harmful foreign interference. The Special Committee on Foreign Interference in all Democratic Processes in the European Union, including Disinformation II (ING2) will further build on its predecessor's work to strengthen the EU's resilience to these threats. The war on Ukraine has increased the sense of urgency to boost the EU's online media framework through the Digital Services Act as well as the European democracy action plan and the forthcoming European Media Freedom Act.

WHAT IF? – Three possible scenarios
With this in mind, there are various scenarios – from best to worst, with some more and some less likely – that could affect the risk of algorithms destabilising political debate.

From Brussels with love
In the best case scenario, the 'Brussels effect' of the EU's legislation – including updates that take Russia's escalated information war on Ukraine into account – would result in new global gold standards for the digital public sphere. Here, the future information ecosystem would be a safe, non-intrusive space, where people's fundamental rights are protected, while those who wish to shape their own experience would have the appropriate tools to do so, including verified, reliable information, high-quality local media and transparency about online platforms' personalisation tools. Under this scenario, balanced legislation would address the risk of algorithms destabilising political debate without compromising freedom of expression.

The dark side of extreme transparency
In the extreme transparency scenario, platforms would be forced to provide evidence that their algorithms are safe and do not provide a threat to users' health or to societal stability. The development of new 'western' platforms would slow down significantly and the operation and evolution of existing ones would be markedly affected by legislation. Differing standards across the world – with consumer protection in the EU significantly stronger than in other parts of the world – would increase the appetite for a black market for 'alternative' apps, attracting large groups of users – including young people – to the dark web. Under this scenario, stringent regulation would address the risks but may have undesirable side effects.

From big tech to bad tech
Whereas the biggest platforms currently do not visibly display any particular political agenda – at least seen from the North Atlantic perspective – this could change in the future. So far, the aim of the biggest tech companies has been to boost profits and growth. However, new platforms – launched by non-democratic states or state actors, or even pushed by anti-democratic non-state actors in a democratic country – could covertly or overtly further an ideological, anti-democratic
agenda, exploiting vulnerable audiences. Alternatively, an existing social media company could decide to work towards boosting a specific partisan, anti-democratic agenda. In such a scenario, the social media platforms in question could customise their algorithms to give preference to certain (for example, anti-democratic or anti-EU) views and people, without informing users of this bias. Ultimately, a large platform with an anti-democratic agenda could use its algorithmic power to manipulate the public to foment widespread unrest and even overthrow elected governments. Under this scenario, EU legislation and action would fail to address the risks posed by algorithms to political debate and would ultimately fall victim to weaponisation of the infosphere.

**Figure 21– Charting the impact of the 'bad tech' scenario on four key factors**

![Diagram showing the impact of the 'bad tech' scenario on four key factors: Wealth, Societal, Twin transition, EU in the world.]

**References**


Deepening and pervasive social divisions

WHAT? – State of play

The impact of the pandemic on employment and society

The coronavirus pandemic and the healthcare and lockdown measures taken to limit its spread have had far-reaching and lasting economic and societal consequences. Many companies were forced to interrupt or significantly reduce their activities, with some losing their capacity to pay their employees. This has led to income losses (and, as a consequence, in-work poverty) or unemployment for a significant part of the population. While the latter could be provisional, it could also become permanent, if companies are unable to survive the crisis. In some cases, tax-benefit systems and support measures such as short-time work schemes helped significantly reduce losses in disposable income. Other workers had to adapt quickly to significantly modified working conditions, such as longer working hours, exposure to health risks, and mandatory wearing of protective equipment. Many households lost a significant part of their income and were exposed to the risk of poverty. They also had to cope with work-life balance problems and a sudden need for adequate digital equipment for teleworking and home-schooling.

According to estimates, the initial employment shock induced by the first wave of the pandemic was 10 times greater than that during the economic crisis a decade earlier. To prevent a drastic rise in unemployment, Member States mobilised existing short-time work schemes (STW – public programmes allowing firms experiencing economic difficulties to temporarily reduce, either partially or totally, the hours worked by employees while providing them with income). Others developed them quickly in spring 2020, to keep workers in formal employment and avoid mass dismissals. In addition to strengthening STW schemes, governments also provided support to companies and adopted a number of discretionary non-employment measures (for instance child bonuses), to relieve households at least partially from the financial impact of Covid-19. Several Member States applied temporary lay-offs (when workers do not work at all for a period but retain their employment contract and receive a certain level of income or support). The European Commission swiftly adopted the SURE instrument (Support to Mitigate Unemployment Risks in an Emergency), which acted as a second line of defence, supporting short-time work schemes and similar measures. According to Commission estimates, more than 40 million people were covered by these arrangements in the EU by mid-2020. National labour market measures supported by SURE are estimated to have reduced unemployment by almost 1.5 million people in 2020.

Many companies and self-employed people chose to go digital, with a rapid uptake in teleworking. According to one survey, 37 % of the EU population was teleworking in April 2020 (in certain Member States, such as Finland, the figure was as high as 60 %). In 2021, figures were slightly lower, with 24 % of the EU population teleworking exclusively and 18 % partially. Teleworking proved a particularly viable option for office employees, despite presenting its own challenges (for instance the need for technical equipment and technical support, or time management and work-life balance problems). Another survey points out that companies accelerated the digitalisation of their customer and supply-chain interactions and their internal operations by three to four years. The share of digital or digitally enabled products in their portfolios has accelerated by seven years. The Fund for European Aid to the Most Deprived (FEAD), already providing food and other basic material assistance for people in need, was granted additional financial support from the REACT-EU package.1
SO WHAT? – Risk factors involved

Groups at risk

The quick and efficient measures meant that EU-level unemployment rates began falling in 2021 compared with the previous year’s figures (6.4% of people of working age were unemployed in December 2021, compared with 7.7% in September 2020, and even lower than the 6.6% measured before the pandemic). However, the statistics also show growing inequality between different areas, skill levels, age groups and sectors. Since the outbreak of the pandemic, low-skilled workers have been more likely to lose their jobs. Young people and workers on temporary or other atypical work contracts or in precarious working conditions also faced greater risk. The closure of schools and childcare facilities forced workers with children to care for them at home and help them with e-schooling while teleworking. This led to severe work-life balance problems, affecting certain groups already at risk (single parents, parents of young children, large families) more than others.

Workers in certain sectors unsuitable for teleworking or without digital solutions, such as the tourism and hospitality sectors in particular, were exposed to a higher risk of becoming unemployed. Workers in arts and entertainment were also exposed to a high risk of unemployment due to the cancellation of cultural events for pandemic-related reasons. Employees in the construction and transport sectors also faced higher risks, as many companies could not respect the required health and social distancing measures and had to stop their activities. Even if most Member States extended income protection measures to groups not previously protected, some groups of workers, in particular self-employed people, fell outside the protection provided because they did not meet the eligibility criteria.

Analysis shows that by July 2020, nearly 50% of workers in the EU had moved to full or partial telework. However, this tendency was more favourable for certain sectors (highly digitalised industries, or those that were able to move online, such as information and communications technologies, scientific and technical services, and financial services), regions, and social groups. Analysis shows that the more highly educated and those in urban areas (in particular capital regions) were better placed to work from home. This was due to several factors. First, these groups had better access to broadband internet and adequate digital equipment (computer, scanner, printer), and the obligation to share this equipment with others in the same household was lower. Second, their digital skills enabled them to use such equipment and to perform their tasks in a digital environment.

WHAT NEXT? – Impact on the EU

New measures at EU level

The recovery plan for the EU will enhance sustainable recovery in the Member States. It consists of two parts: the multiannual financial framework (MFF) for 2021 to 2027, which provides the means to implement EU policies and investments in the medium to long term, and the Next Generation EU (NGEU) fund allowing for the financing of a pan-European Recovery and Resilience Facility (RRF) instrument. The latter is a temporary recovery instrument of €723.8 billion (in current prices), which aims to repair the economic and social damage caused by the pandemic. While its centrepiece is the RRF, aimed at supporting reforms and investments undertaken by EU countries, it also includes the Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU), which continues and extends the crisis response and repair measures delivered through the Coronavirus Response Investment Initiative and the Coronavirus Response Investment Initiative Plus.

The full impact of Covid-19 on the labour market was cushioned by short-time work and other such schemes to protect jobs. Establishing permanent short-time working or similar systems that can be activated in crisis situations and allow for the structural adjustment of economies and human resources might therefore be useful. The involvement of social partners or other stakeholders in
these schemes could prevent exclusion owing to ineligibility and other anomalies. Short-time work schemes could continue to be financed from the Recovery and Resilience Facility. There is also financial support available from the European Social Fund Plus (ESF+), the European Regional Development Fund (ERDF), the Just Transition Fund, and the European Globalisation Adjustment Fund (EGF).

To protect workers in atypical work from higher risks of unemployment in crisis situations, stronger emphasis has already been placed since the outbreak of the pandemic on a need for legislation for non-standard work forms, such as platform or part-time work, workers with fixed-term contracts, on-call and portfolio work, as well for the self-employed. A proposal for a directive on platform workers was adopted by the European Commission on 9 December 2021. The situation for the self-employed is still not sufficiently regulated at EU-level, in particular as regards their access to social protection schemes, notably unemployment benefit, sickness benefits and schemes covering occupational diseases and accidents at work. In addition, just like workers in atypical work forms, they have to deal with a lack of adequate training opportunities, unclear coverage under labour law, the absence of dispute resolution mechanisms, and discrimination.

As for unemployment resulting from the closure of factories or services, the EU-wide regulation of Covid-19 vaccines as well as the introduction of an EU-wide digital Covid certificate, the Re-Open EU framework can help reduce its impact.

**WHAT IF? – Three possible risk scenarios**

In the domain of social developments and employment, a number of risk scenarios stand out as having the potential to undermine the achievements of recent decades in these areas.

**Widening digital divide**

Digital skills are necessary to use digital tools adequately, however the contrast between different demographic, social and regional groups are sharp. According to data from the Digital Skills and Jobs Coalition, about 42 % of Europeans today still do not have a basic level of digital skills. Among people on the labour market, 37 % of those active lack sufficient digital skills, despite the increasing need for such skills in all jobs. Statistical findings also show that 80 % of young adults, 84 % of individuals with high-level formal education, and 87 % of students, have at least basic digital skills – compared with only 33 % of those aged 55-74. If older workers cannot catch up with the ongoing digital transition, strongly accelerated by the pandemic, they could lose their chance to integrate into the labour market, exposing an entire generation to a high risk of unemployment and poverty. Regional differences seem to be important as well: when looking at the digital skills of the population: just 48 % of individuals living in rural areas possess at least basic digital skills, in contrast with those living in cities (62 %). Without upskilling measures adapted to individuals’ needs and opportunities, an insurmountable gap could emerge between social and age groups, as well as between regions or among Member States.

**Rise in 'digital poverty''**

The Covid-19 pandemic and the accelerated digital transition that followed also threatens years of progress in reducing income poverty and inequality, and further weakens social cohesion. According to 38.3 % of respondents to a survey carried out by the World Economic Forum, digital inequality is one of the major risks of the next two years, but is also rated as the seventh most likely long-term risk. Digital inequality arises not only from a lack of digital skills, but also from economic factors, such as a lack of adequate digital equipment for the transition to remote work, online education, e-governance or e-commerce. Workers excluded from digital resources are likely to miss out on educational and employment opportunities, increasing the risk of livelihood crises and the likelihood of further erosion of social cohesion. Initiatives at EU level aimed at helping these households to upgrade their digital capabilities are therefore essential.
Possible backlash against vaccination and digital Covid certificates

Rising vaccination rates and the introduction of an EU-wide Covid vaccination certificate can help to prevent economic lockdowns and the closure of production facilities or entities in the hospitality sector, such as hotels or restaurants, or any service requiring physical contact. This benefits a number of sectors that suffered from important income losses during the first and the second wave of the pandemic. However, progress in bringing down infection numbers thanks to vaccination could be put at risk by slowing vaccination numbers or a backlash against health measures taken by Member States. Misinformation campaigns could erode community trust in science, threatening governability and menacing social cohesion. Awareness raising, especially for vulnerable groups, is essential. Employers could also consider measures that support the uptake of Covid-19 vaccines among employees, by building conviction and making vaccination as convenient and costless as possible.

Figure 22 – Charting the impact of 'digital poverty' on four key factors

![Diagram of digital poverty impact]

References:


1 Recovery Assistance for Cohesion and the Territories of Europe package.

2 According to the Digital Poverty Alliance, digital poverty can be defined as 'the inability to interact with the online world fully, when, where and how an individual needs to'.
EU spending capacity under threat

WHAT? – State of play

The EU budget is funded by various types of EU own resources (as shown in Figure 23), including traditional own resources, contributions based on gross national income (GNI) and value added tax (VAT), and other revenues. As of 2021, a new own resource based on non-recycled plastic packaging waste has been introduced and more are to be introduced in the coming years.

The traditional own resources are tariffs or customs duties and levies applied at a common rate to imports entering the EU. VAT-based contributions are based on a harmonised measure of consumer spending; the GNI-based contributions are based on each Member State’s GNI, with certain adjustments known as rebates. The share of the different types of own resources changes over time.

Since the EU is not allowed to run a budget deficit, the GNI-based contributions are there to ensure that this remains the case, and over the years the EU has been funded increasingly by them. These types of contribution are perceived by many as transfers from the Member States, which creates significant difficulties in bringing the discussion to the EU level in accordance with the letter and spirit of the EU Treaties, especially given the European Parliament’s lack of power over own resources. In addition, extensive amounts of EU budget funds are managed by the Member States and, in effect, return directly to them. Thus, EU budget negotiations, especially within the Council, are dominated by a zero-sum or a net balance game, which creates divisions and sometimes political tensions between net contributors and net beneficiaries.

Figure 23 – Own resources of the EU budget, 2000-2020

Source: EPRS based on European Commission data.

The 2021-2027 multiannual financial framework (MFF) was adopted in a package that included the Next Generation EU (NGEU) instrument – a response to the pandemic’s severe adverse effects on the EU economies – and linked to the Own Resources Decision. NGEU provides substantial funding on top of the 2021-2027 MFF, which is financed by EU borrowing on an unprecedented scale on the financial markets. This new expenditure increased the need for additional own resources and thus exacerbated the existing tensions and difficulties relating to own resources. The Own Resources Decision was ratified by all 27 Member States by 31 May 2021 and entered into force in June 2021.
The legally binding Interinstitutional Agreement (IIA) that introduced the principles and criteria for new own resources confirmed the link to NGEU repayments and established an own resources roadmap with regular dialogue. With a delay to the roadmap established on 22 December 2021, the Commission proposed the Next Generation Own Resources to establish some of the new own resources: revenues from emissions trading (ETS), resources generated by the carbon border adjustment mechanism (CBAM), and resources based on the recent OECD/G20 agreement on a re-allocation of taxing rights over multinational corporations (‘Pillar One’).

SO WHAT? – Risk factors involved

Despite the shortcomings of the current system of own resources, reforming it has proven to be a difficult process. In its resolution on the Reflection paper on the future of EU finances, the European Parliament stressed that additional political priorities should be coupled with additional financial means and not be financed to the detriment of existing EU policies. The increased demand for funding related to the NGEU-related borrowing, as well as the policy response demands created by the Russian war on Ukraine, may create momentum and increase the political will for such a reform, securing additional resources to cover the growing demands without limiting the resources allocated to existing programmes.

The treatment of NGEU interest and repayment had already been a sticking point in the 2022 annual budget negotiations, although the bulk of the repayment will happen only years from now. The magnitude of the NGEU means that an interest rate increase to control current widespread inflation could already create problems with interest payments on NGEU borrowing in the 2021-2027 MFF.

The even more considerable risk connected with the lack of increased own resources will coincide with the start of the next MFF, when additional funds will be needed to start repaying the principal on the NGEU borrowing. This comes with the risk that the funding of the debt recovery could possibly limit funding for existing MFF programmes and, therefore, the EU’s ability to conduct policies.

The Next Generation Own Resources proposal of December 2021, which is projected to generate revenue of up to €17 billion a year on average for the EU budget, has been proposed in a package with an MFF amendment proposal leading to the introduction of the Social Climate Fund. As the Fund expenditure needs to be compensated, it demands newly generated revenues. Concerns have been raised as to whether the projection of the new own resources would be sufficient to cover the debt repayment and the Fund without cutting funding for existing policies. Also, any additional (i.e. currently unforeseen) budget needs might have to be financed by further cuts to existing programmes.

If the humanitarian, security and economic crises related to the Russian war on Ukraine continue growing, the mobilisation of available relevant EU budget instruments might be insufficient and funds from existing programmes might have to be diverted in that direction. The expected proposal of a further package of new own resources, as agreed under the IIA terms, has the potential to lower this risk by adding new revenues to the EU budget.

Each of the proposed new own resources is linked to a specific new policy proposal relevant to its implementation. There is a risk that these proposals may not be adopted, or not in the form that would allow the proposed new own resources system to be implemented as planned and secure the necessary and projected revenues.

The financial markets responded quite positively to EU borrowing to secure the NGEU financial capital; the delay – according to the roadmap for adopting and implementing the OR reform – in issuing the OR proposal had caused concern for the future. Unless there is a certain amount of progress towards catching up with the roadmap, there could be a negative signal to the markets, as the plan is to use some new own resources to repay the debt.
If the introduction of new own resources is delayed or insufficient, the share of GNI-based contributions may have to be increased, thus intensifying still further the already tense budgetary negotiations in the EU. This could reinforce the mentality of *juste retour* (fair returns) that prevents budgetary negotiations from focusing on EU interests. The introduction of new own resources with a stronger European connection to the actual source and principle of revenue collection would have a strong impact on the perception of national contributions versus resources linked to European policies.

In the event of EU budget revenue being under threat, the risk is grounded in the actions of the EU institutions and Member States. Risk factors such as the response of the markets, interest rates or unexpected external shocks could only be additional and function as aggregated risks.

**WHAT NEXT? – Impact on the EU**

If the own resources system remains as it is, it would not be able to respond simultaneously to the need to maintain the current funding for all existing MFF programmes, to secure sufficient funds for the future NGEU debt repayments, and to secure additional resources for programmes targeting the consequences of the evolving war in Ukraine. There are several policy options ahead:

1. Increase own resources by introducing new own resources: own resources reform is difficult, as it is one of the heaviest and lengthiest of all EU procedures, requiring unanimity in the Council and national ratification; this is the path currently being taken by the EU, although with delays according to the agreed roadmap.

2. Further or permanent increase of the own resources ceiling under the current own resources system, as well as an increase of the call rate: this would result in an increase in GNI-based contributions, but is an unlikely scenario given Member States’ resistance to doing so in the past, as well as the current economic pressure the war in Ukraine creates for many Member States.

3. Further borrowing: in its conclusions, the European Council has insisted on NGEU being temporary, but borrowing might become necessary if the above two policy paths are not taken, especially when debt repayment becomes due. The EU’s very good reputation on the financial markets might make this policy option feasible in terms of price, speed and flexibility of reaction to external shocks.

4. Reduce funding for the current MFF programmes: such an approach is highly unpopular. Its implementation requires reviewing long-term EU policy commitments and reaching difficult agreements, as MFF negotiations demonstrate.

As of 1 January 2021, a new contribution based on non-recycled plastic packaging waste has been introduced as the first step in the planned introduction of new own resources. If the December 2021 Commission proposal is adopted, further revenues from the package of new sources will start contributing to the EU budget in 2023 and will reach cruising speed in 2026. These new own resources include a CBAM, the extended EU emissions trading system (EU ETS) and resources based on the reallocated profits of very large multinational companies under the OECD/G20 agreement on a re-allocation of taxing rights (‘Pillar One’).

The Own Resources Decision needs to be approved unanimously in the Council after consulting the European Parliament. The decision can enter into force once it is approved by all EU countries in line with their constitutional requirements. The MFF Regulation, included in the package together with the Own Resources Decision, needs to be adopted unanimously by the Council after obtaining the consent of the European Parliament.

The half-year delay in submitting the proposal raises concerns about the timely implementation of the own resources reform. A delayed inflow of new revenue under this proposal could possibly be compensated by speedy presentation of a second basket of new own resources – currently planned by the Commission for the end of 2023. Other new own resources options are included in the IIA.
WHAT IF? – Three possible scenarios

Although there is a scenario in which the own resources reform is conducted successfully – on time and securing sufficient revenues for debt repayment, implementing all existing programmes and facing new challenges – it is excluded from the list, not due to the non-existent probability of it happening, but due to the lack of risk of a negative impact on the EU budget.

Suboptimal – New own resources introduced or implemented partially

Assuming that the EU manages to reach an agreement on introducing the currently proposed and the planned new own resources according to the updated timeline, it might be applied in a suboptimal way. The complexity, novelty and politicisation of the debate on the new own resource options makes it possible that agreement may not be reached on all the new own resource types. It is also possible that the new own resources that are introduced will not secure the expected levels of revenue, which are currently rather broad estimations. This concern is exacerbated by the inclusion in the Next Generation Own Resources proposal of the Social Climate Fund and the expected increased expenditure under certain EU programmes in response to the consequences of the Russian war on Ukraine, which lead to an increase in expenditure under the EU budget.

Blockage – New own resources are not introduced

Considering the history of difficult agreements on own resources amendments, it is possible that there will be no agreement. Although the Commission proposal is generally in line with the direction outlined by the IIA, experience indicates that the probability of this scenario should not be overlooked. Consequently, there could be: insufficient resources to deal with any potential external shock, including the consequences of the ongoing war in Ukraine; insufficient resources in the current MFF to pay interest on NGEU payments if interest rates rise or even insufficient resources to secure the introduction of the Social Climate Fund; and insufficient resources in future MFFs to repay the NGEU principal, while continuing existing EU programmes. To overcome this risk, the EU should resort either to a further increase in GNI-based own resources (inevitably creating tension between Member States due to the heavy discrepancy in their economic output) or to further borrowing (a possibility that is currently ruled out).

External blow – A new crisis hits the EU before new own resources are introduced

While the EU is still recovering from an unfinished pandemic crisis, there is always a risk of another crisis occurring, such as the ongoing war on its eastern border. Therefore, the EU must be able at any time to secure additional own resources in order to respond with relevant policies. The analyses by Axa, Allianz, Lloyds’ and the WEF demonstrate increased risks of external shocks, and therefore the probability of this scenario should not be underestimated. The risk of an external crisis exists independently from the implementation of the new own resources system, and if such a crisis happens before implementation, it would potentially limit significantly the capacity of the EU to meet citizens’ expectations when responding to crises, as the EU’s resources are already under pressure. Currently, the existing EU programmes are capable of meeting the demands created by the Russian war on Ukraine, but it is hard to estimate whether that would be the case in the future. Although there is also the risk of own resources being insufficient even if the reform is fully implemented, the new additions to the current revenue portfolio would still increase the capacity of the EU to respond to unforeseen events.

If NGEU as an instrument of managing the negative consequences of external shocks proves to be a success, then borrowing for recovery may become a permanent option for the EU. It would be all the more necessary to conduct such borrowing centrally at EU level should the risk of additional crises increase.
Figure 24 – Charting the impact of 'no new own resources' on four key factors

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New 'China shock(s)'

WHAT? – State of play

The 'reform and opening up' of China's economy from 1978 to today, and the change in China's terms of trade engendered by its accession to the World Trade Organization (WTO) in 2001, have reordered the global economy and helped turn east Asia into a driver of world trade and much of the world's economic growth. However, some argue it also gave developed economies' manufacturing, industrial base and labour markets a 'China (trade) shock', although its nature and reach is disputed. This shock, or at least the perception of it, has in turn impacted Western democratic politics, playing into, and perhaps causing, socio-economic changes and new forms of disruptive ideological polarisation.

China's economic rise and integration in world markets have also made the rest of the world more dependent on it and neighbouring countries as suppliers of goods and technology, such as medical devices and personal protective equipment (PPE), and as an export market (10.5 % of total EU exports in 2020 – see Figure 25). The EU and other developed economies are now closely linked to east-Asian origin supply and global value chains, whose length and complexity amplify the impact when they are disrupted. China is now also a major importer of raw materials, including gas, oil and coal. In times of crisis, such as the 2008 global financial crisis and the Covid-19 pandemic, China (however it may have directly or indirectly contributed to these two crises, and whatever destabilising role it may now also play) was a stabilising force, providing life-saving imports and job-saving demand for exports. This purchasing power has possibly simultaneously made China a destabilising force, through its close political and economic ties to Russia, which may have strengthened Russia's resilience to international sanctions and economic pressure in response to its war on Ukraine, albeit within limits.

Despite its increasingly important global role, China's annual gross domestic product (GDP) growth rate has also declined progressively, from a 15-year peak of 14.2 % in 2007 to 5.9 % in 2019 (before sinking to 2.3 % in 2020), with signs of overheating in the Chinese housing market and a more restrictive policy environment for local technology businesses.

**Figure 25 – EU trade in goods and services with China (share of total EU trade)**

As China has grown richer, it has undertaken a programme of military modernisation, forged new international partnerships and invested abroad to narrow the strategic gulf between itself and the United States of America (USA). The People's Liberation Army (PLA) has approximately 975 000 active-duty personnel, the world's largest navy in numerical terms, and the region's largest – and the world's third largest – air force, although these forces have yet to be tested in a
major conflict. China has already become more assertive and aggressive towards Taiwan, a de facto autonomous part of Chinese territory. It has increased the range and frequency of ‘grey zone’ operations designed to intimidate, while falling just below the threshold of outright military conflict: for example, cyber- and disinformation attacks, including attempts to influence Taiwan’s elections; air defence zone breaches; and naval patrols around Taiwan. Since 2016, Taiwan has been governed by the anti-unification Democratic Progressive Party, whose stance has contributed to a deterioration in cross-Strait relations. China’s undermining of its own ‘one country, two systems’ policy in Hong Kong has also coincided with, and probably contributed to, a hardening of Taiwanese public opinion against a change in the constitutional status quo. China has also become more confrontational towards other international partners. It has encroached on southeast Asian neighbours’ maritime space and developed militarised island facilities in contested waters in the South China Sea. China used the pandemic to sow disinformation and social media attacks in Europe, launching cyberattacks against Western authorities and businesses, while also trying to gain influence in Asia, Africa and Latin America by way of ‘vaccine diplomacy’ and the export of surveillance technology. Furthermore, China has strengthened its strategic ties with Russia and resisted efforts at the United Nations to condemn Russia’s war on Ukraine, even while it stops short of expressing outright support for the war itself.

**SO WHAT? – Risk factors involved**

One potential new China shock could take the form of increasingly fierce competition in emerging economic sectors, for instance in climate and environmental technologies, and digital technologies, including artificial intelligence. For example, by 2020, China had established itself as a leader in lithium-ion battery supply chains, accounting for 80% of the world’s raw material refining, 77% of the world’s cell capacity and 60% of the world’s component manufacturing. In 2021, China dominated all stages of solar panel production. China’s generous state subsidies and ‘home advantage’ in the form of a large and sheltered domestic market that incubates businesses before they are exposed to international competition, may allow it to dominate further sectors. China’s ‘military-civil fusion’ strategy, while aimed primarily at military modernisation, could also have commercial spin-off effects, comparable to the development of new consumer technologies based on US defence research spending. In addition, China appears to have used investment in foreign businesses in Europe and elsewhere to acquire technology in pursuit of these commercial aims, thereby blunting Europe’s competitive edge.

Alternatively, an economic downturn in China, or a sustained period of attempted ‘decoupling’ between China and the rest of the world, could create disruption beyond China’s borders, even if in the short term China remains dependent on foreign technologies to advance its own industrial development. As China and neighbouring economies, which are linked by overlapping regional trade agreements of increasing scope and complexity, now account for an ever greater share of economic activity and global trade, muted Chinese demand could depress global prices and reduce export revenue in other markets. Just as the pandemic has strained global supply chains, by shutting down production along parts of those chains, before causing a surge in difficult-to-meet demand as developed economies recover, a Chinese economic downturn could strain supply chains and disrupt production and consumption elsewhere.

Finally, further Chinese military expansion and modernisation, sustained by continued economic growth, could embolden China to invade Taiwan, or project power in other theatres to protect newly critical supplies. Conversely, an economic slowdown could tempt China’s leadership to shore up legitimacy through conquest. Since the foundation of the People’s Republic of China, the Chinese Communist Party (CCP) leadership in Beijing has perceived Taiwan’s de facto autonomy as a revisionist challenge to the post-1949 political settlement in mainland China. In 1979, the USA switched diplomatic recognition from Taipei to Beijing. However, under the 1979 Taiwan Relations Act and subsequent declarations, it committed to helping Taiwan to strengthen its defences, while nevertheless maintaining ‘strategic ambiguity’ about how the USA might respond in the event of
invasion from the mainland. Under Xi Jinping, US official concern about a possible invasion has grown. Analysts are nevertheless divided on the question of how likely or imminent it may be, even in the context of Russia’s war on Ukraine. Were China to succeed in seizing Taiwan by force, it may thereby acquire Taiwanese semiconductor production capacity as well as cutting-edge US military hardware – unless the Taiwanese authorities succeeded in destroying them first.

**WHAT NEXT? – Impact on the EU**

As noted above, one possible new China shock could take the form of heightened technological and commercial competition from China in emerging sectors, further undercutting the EU’s competitive edge in the global trade in sophisticated and high-value-added goods. Heightened competition from a China that spurns Western competition and subsidy policy norms may test the regulatory architecture of the EU’s single market, and the politico-economic consensus upon which European integration rests. However, the EU has created tools to counter ‘unfair’ Chinese competition, including a foreign direct investment framework, a proposed foreign subsidies regulation, and a revised Enforcement Regulation. The EU is also considering further tools, such as the proposed distortive foreign subsidies regulation and international procurement instrument. Moreover, the EU now plans to invest in semiconductor production.

Conversely, China's economic decline, paralysis or international decoupling could damage EU trade and prosperity, just as European economies recover from the economic consequences of the pandemic, with significantly higher debt-to-GDP ratios (in the first quarter of 2021, the euro area average figure exceeded 100 % for the first time) limiting options for further public fiscal support. It could also disrupt EU supply chains should the EU fail to diversify its supply chains, in line with its 2021 trade policy review. In addition, a Chinese downturn would impact China's external financing via its Belt and Road Initiative, potentially creating an opportunity for alternatives, including the EU’s planned global gateway. A disruptive China, whether through expansion or decline, would also have a bearing on the EU’s Indo-Pacific and multilateralism strategies.

Finally, unanswered questions about how the USA would respond in the event of a cross-Strait invasion, and what the outcome of any conflict would be, could have strategic repercussions for the EU. A US failure to assist Taiwan, or defeat by PRC forces in any conflict, could imperil US global leadership and shock the current world order, forcing US allies, including those in Europe, to adjust their foreign and security policy settings amid a debate about European 'strategic autonomy'. It would also raise questions about the value of the US security guarantee in Europe, with repercussions for EU relations with Russia.

**WHAT IF? – Three possible scenarios**

There are at least three possible scenarios, some more and some less likely, that could increase or decrease the likelihood and impact of any future ‘China shock’.

**China dominates new economic sectors**

In this scenario, China sustains its economic growth and continues to invest heavily in military research and 'domestic champions', outpacing a politically and economically fragmented EU. China manages to leapfrog Western competitors in emerging technologies such as artificial intelligence, and succeeds in implementing a 'dual circulation' model that reduces its dependence on trading partners for key technologies, while simultaneously increasing those partners' reliance on China. China reaps both commercial and strategic advantages as a result.

**China slows down**

In a second scenario, China’s growth continues to slow as it succumbs to the combined pressures of a 'middle income trap', economic decoupling, an ageing population, low immigration, a real estate bubble and an authoritarian education system (Major slowdown of the Chinese economy). As tax
receipts decline, defence spending shrinks and military modernisation slows, impeding strategic catch-up with the USA, and sustaining US hegemony in Asia and elsewhere. However, weak Chinese demand for foreign exports drags global growth down. Alternatively, a 2015 European Central Bank analysis suggests that weaker Chinese demand could lower commodity prices in a way that supports euro area growth.

**China goes to war with a nuclear power**

In a final scenario, China goes to war with a fellow nuclear power, creating the most dangerous conceivable threat to global peace and security. One way this could happen is if border tensions between China and India were to escalate, or alternatively if China were to intervene on the side of Pakistan in a conflict between that country and India. However, the scenario attracting the greatest amount of attention today is one in which China abandons 'grey zone' tactics in its campaign to unify with Taiwan, and instead launches an invasion to unify by force, possibly in advance of the 2027 centenary of the founding of the PLA. Four possible further scenarios follow from this: in the first, the USA successfully prevents or reverses annexation, upholding the existing balance of power. In the second, the USA intervenes to reverse reunification, but struggles to prevent the conflict from exploding into a broader military conflagration. In the third, the USA tries to intervene, but is defeated. In the fourth, the USA limits itself to a campaign of political and economic pressure on China, comparable to that waged against Russia since the annexation of Crimea. The first follow-on scenario risks seriously destabilising China politically and socially. The consequences of the second scenario are incalculable. The final two follow-on scenarios could prompt US allies in Europe and elsewhere to reconsider their strategic postures.

**Figure 26 – Charting the impact of possible 'China shocks' on four key factors**

![Figure 26](image)

**References**


In 2019, Chinese President Xi Jinping suggested that a Taiwan reunified with mainland China could maintain its present political system in line with the 'one country, two systems' principle formulated by former paramount leader Deng Xiaoping during negotiations with the United Kingdom on the handover of Hong Kong. In March 2021, High Representative Josep Borrell accused China of 'consciously dismantling the 'one country, two systems' principle in violation of its international commitments and the Hong Kong Basic Law'.


Major slowdown of the Chinese economy

WHAT? – State of play

The Covid-19 crisis has had a major impact on the Chinese economy, but so far to a lesser degree than on most other advanced or developing economies. China's growth reached 2.3 % in 2020 – low by Chinese standards but much higher than the global growth rate (-3.1 %). For 2021, in its latest World Economic Outlook, the IMF forecasts a growth rate for China of 8.0 %, compared with a global forecast of 5.9 %. For 2022, the IMF estimates that China will grow by 5.6 %, compared with a global growth rate of 3.6 %.

Figure 27 – Chinese annual gross domestic product growth rates since 1980

China's annual growth rate has averaged almost 10 % since the country began opening up in 1978, but since reaching the most recent peak growth rate of 14.2 % in 2007, growth rates have been falling, reaching 5.9 % in 2019. However, given the much faster growth in China than in the rest of the world, the country's contribution to global growth has remained substantial: China accounted for 28 % of all growth worldwide in the five years from 2013 to 2018 (more than twice the share of the United States). In the same vein, in 2020 China accounted for almost 15 % of global trade in goods (and close to 6 % of global trade in services).

China is now the EU's biggest source of goods imports and its second-biggest export market (after the US). The main EU imports from China are industrial and consumer goods, machinery and equipment, and footwear and clothing; the EU's main exports to China are: machinery and equipment, motor vehicles, aircraft and chemicals. China is also often central to EU companies' global supply chains.

The financial markets were recently rattled by the possible default of Evergrande, a leading property developer in China that has about US$305 billion in liabilities. On top of growing problems in the real-estate sector, China is also facing a considerable challenge from rising indebtedness. Non-financial firms, households, banks and asset managers are highly indebted, bringing 'total social
financing’ to about 230 % of gross domestic product (GDP) as of June 2021, up 15 percentage points (pp) from end of 2019 according to the IMF Financial Stability Report. The tightening of financial conditions by China’s authorities also seems to have worsened the misallocated credit problem, with priority in the distribution of credit often given to state-owned-enterprises. These challenges come on top of others, such as the ongoing and accelerating decline in the working-age-population, the rising influence and controls of the Chinese Communist Party (CCP) on business decisions, and ongoing environmental decline.

SO WHAT? – Risk factors involved

As the IMF states in the most recent edition of its Financial Stability Report, contagion from problems in the real-estate sector has so far been limited. However, the IMF also insists that while China’s authorities have the tools to step in if the situation escalates; there is a risk that broader financial stress may emerge, both within China and in offshore markets in particular. In this scenario, a slowdown in economic growth and a tightening in financial conditions in China could spill over to the rest of the world, lessening the global appetite for risk and tightening financial conditions in emerging markets.

In order to safeguard financial stability, the IMF therefore recommends that China’s authorities continue to pursue coordinated efforts across agencies to contain leverage and phase out implicit guarantees. While these measures would increase the stability of the financial system and lead to a more balanced growth model less reliant on real estate, the immediate result is likely to be a considerable slowdown in GDP growth compared with the rates seen since the opening-up in 1978. This trend would be reinforced by the decline in China’s working-age population (unless the government takes decisive action to drastically increase the retirement age), and President Xi’s increasingly obvious preference for the promotion of equity and stability over economic growth. On top of these factors, severe supply bottlenecks in container shipping might also induce European companies to shorten supply chains, e.g. by reshoring into the EU. In addition, the China-Europe forum of 17+1 was reduced in 2021 to 16+1 as Lithuania left the formation and restored economic relations with Taiwan, only to be faced with trade blockage by China, with political and supply chain repercussions throughout the EU. China’s ongoing ‘zero-Covid strategy’ is also starting to take its toll on Western companies based in China, which often struggle to manage their companies when faced with very harsh immigration rules.

WHAT NEXT? – Impact on the EU

Back in 2015, the European Central Bank (ECB) stated in its own Financial Stability Review that ‘developments in China could affect the euro area in multiple ways from a financial stability perspective, including via trade, commodity and financial channels, which may work either directly or indirectly’.

The ECB concluded, however, that – in 2015 – direct trade and financial links between the two sides were not strong enough to produce major problems for the euro-area and added that the effect of lower demand for euro-area products by China would be ‘partially offset by the positive impact of lower commodity prices on euro area growth’. Econometric simulations carried out by the economic service of the European Commission the very same year also concluded that the main impact would come from ‘concerns over Chinese growth prospects and spill-overs to emerging markets’ that could lead to ‘increased financial market volatility and risk aversion with knock-on effects on the EU economy’. The development of bilateral trade between 2015 and 2019 (the last year before the pandemic) was not such as to put the very similar conclusions from the ECB and the Commission in doubt (China’s share in EU imports rose from 17.1 % to 18.9 % and its share in EU exports from 8.2 % to 9.9 %). However, portfolio investments from the EU into China and also from China into the EU rose remarkably from 2015 to 2019, increasing the risk of contagion.
Regarding the financial channel, the ECB also warned in 2015 that rising volatility produced by events in China could negatively affect confidence and with a powerful knock-on effect on euro area financial stability.

In an overall environment of high valuations in stocks and bond prices, a confidence shock coming out of China could, in the worst case scenario, provoke a Minsky moment, a sudden and self-reinforcing plunge in asset prices (somehow similar to what happened in September 2008). However, central banks – including the ECB – appear better prepared now to face such a potential challenge. Furthermore, not least as a consequence of the stricter financial regulations launched by the G-20 summits in Washington and London in 2008 and 2009, the financial system seems better prepared now to face the consequences of such a confidence shock.

**WHAT IF? – Three possible scenarios**

With this in mind, there are various medium-term scenarios, some more and some less likely, that could move China's growth trajectory in substantially different directions with a potentially considerable impact on global economic and political developments.

**China manages a transition to slowly decelerating growth**

For the year 2025, the Bank of China projects a 2025 GDP growth rate of 5.1% – very much in line with the IMF's projections for China for the years after 2022. Furthermore, the IMF’s projections for GDP growth up to 2026 seem to imply that the IMF considers that in the medium-term, the US growth rate will be around 1.7% and that of the euro area around 1.4%, while China's annual growth rate would gradually decline by 0.1 pp. per year, but still reach 4.9% in 2026.

Under these assumptions, China is likely to become the biggest national economy in the world, also in exchange-rate terms, by around 2030 (assuming not too high fluctuations in exchange rates). In this case, China could – in a more ‘responsible stakeholder’ scenario – insist on stronger representation in international organisations such as the IMF. This could be detrimental to the influence of some EU Member States inside the IMF. China would probably also try to further boost its influence at the United Nations, not least to deflect criticism of its human rights record, including forced labour, and set its own standards.

At the same time and where current trends to continue, China is likely to use its increasing global clout to extend its economic and political influence still further both in its neighbourhood and in those countries that are becoming more and more dependent on trade with China. In this regard, the Belt and Road Initiative (BRI) will continue to be a major instrument of Chinese power, including in the EU and its close neighbourhood, both to its East and to its South. In this context, the announcement by the European Commission that the Global Gateway programme will try to mobilise up to €300 billion in public and private funds by 2027 to finance EU infrastructure projects abroad appears as a credible alternative especially when combined with similar programmes by like-minded partners.

**Middle-income trap and Chinese leadership on the defensive**

In this scenario, China does not manage to overcome the ‘middle-income trap’, defined in a study by the World Bank as 'a situation whereby a middle-income country is failing to transition to a high-income economy due to rising costs and declining competitiveness'. In this scenario, the authorities procrastinate and growing problems turn out too difficult to be resolved, with the result that the growth rate quickly decelerates to clearly below 5%. While such a scenario evokes images of the bursting of the bubble in Japan in 1990 and the ensuing two lost decades, a recent study argues that China is unlikely to see a similar development.

Such a development would also put China's political system under considerable strain, as the legitimacy of the power monopoly of its Communist Party has to a significant degree been linked to strong economic performance. A recent article in Foreign Affairs also argues that the combination
of declining growth rates plus a deteriorating external environment would make China – as a revisionist power – more dangerous. This appears all the more plausible given that since the 1989 revolt the CCP has been promoting nationalism as the second pillar of its legitimacy.

A 2015 workshop held by the US Council on Foreign Relations (CFR) came to the conclusion that in this scenario of strongly declining growth rates, the Chinese leadership would turn inwards to ensure its monopoly on power, a conclusion possibly based on past experience of the Chinese leadership's reactions to the Tiananmen revolt in 1989. However, China has invested significantly in its military capabilities in the past 30 years– as demonstrated by the July 2021 hypersonic weapon test by China, 'an advance' that, according to the Financial Times, 'caught ... Pentagon scientists off guard'. This could suggest that under the current circumstances, in the event of a middle-income trap scenario an aggressive external reaction could not be ruled out, with some experts considering an attack on Taiwan likely.

At the same time, it could be argued that a China facing huge domestic challenges might indeed continue to turn inwards, opening up space for diplomacy. Under this option, China might refrain from external provocations and decelerate the rise in military spending, but cooperation on issues like climate change might become even more complex. While China might reduce financing for BRI projects considerably, Western countries would probably face rising demand for infrastructure support from countries in Africa, Latin America and south and south-east Asia.

**Leapfroging by China**

Under this scenario, China manages to overcome its increasing structural weaknesses – for instance, the ongoing and accelerating decline in its working-age-population – not only through stringent reforms, but primarily though innovation and fast advances in technology not achieved by its competitors, which have so far dominated the market ('leapfrogging') – a development very similar to what has happened in the field of hypersonic arms (see above).

In this case, the declining input from the labour factor would be more than compensated for by the technologically-induced increase in productivity, resulting in a medium-term growth rate of at least 6% as, for instance, forecast by the Rand corporation. Not only could such a development enable China to become the global economic number one more rapidly, but it might even enable the country to further distance its main economic competitors (US, EU, Japan, etc.). While the already cited recent article by Foreign Affairs argues that China's innovation performance has so far been poor in many areas, the country's rapid progress in artificial intelligence and military technology, its space programme, and ground-breaking energy sources, tell another story. China's attempts to gain control over semiconductor production would also be reinforced, clashing with US and EU ambitions in this area.

In this scenario, the geopolitical consequences might also be less benign than assumed under the first scenario. Not only would China's demands for better representation in existing international organisations appear more justified, the country would probably also double down on its efforts to create parallel international networks. As in the main scenario, China's increased influence both in existing institutions and in those it promotes itself would be detrimental to EU influence, but obviously to a greater degree.

China's military budget would probably continue to rise in step with its GDP, with some geopolitical competitors unable to rise to this challenge. However, it would still take some time before China's military budget reached US proportions.
Figure 28 – Charting the impact of the 'middle income trap' on four key factors

References

Acute stress at EU borders

WHAT? – State of play
Pressure at the EU’s external borders is mounting once again, due to persistent conflicts and political instability in the neighbourhood as well as hybrid attacks that instrumentalise migration for political gain. By 24 March 2022, 3.6 million people had fled the war in Ukraine, mostly heading to the EU – this is more than the total number of refugees already hosted by the EU (2.6 million). Ongoing crises in other regions, such as in Afghanistan, adds to the EU's challenges to receive and provide international protection to all people in need. The number of people trying to cross the EU external borders irregularly is also on the rise. About 200 000 irregular crossings were detected at the EU external borders in 2021, the highest recorded number since 2017 (see Figure 29).

Another worrying development is attempts by foreign governments, such as Belarus, to instrumentalise migrants to sow instability at the EU borders and to launch hybrid attacks on the EU. Although many people crossing irregularly into the EU may need international protection, there is the risk that some irregular migrants might pose a security threat to the EU. For example, fighters active in conflicts in the neighbourhood could exploit vulnerabilities at the borders to enter the EU and engage in terrorist activities. These challenges add to Member States' existing tensions and frustrations with Schengen cooperation, as became apparent in the largely uncoordinated reintroduction of internal border controls in response to the Covid-19 pandemic.

Figure 29 – Irregular crossings of EU external borders – main routes (2018-2021)

Data source: Frontex

SO WHAT? – Risk factors involved
Three major risk factors are affecting EU borders in the short and medium term:

- migration flows overwhelming border capacities;
- increased threats to internal security; and
- instrumentalisation of migration by foreign actors.
First, unstable political and economic situations in neighbouring regions can generate large influxes of people that may stretch Member States’ capacities to control borders and manage flows. The refugee crises triggered by Russia’s invasion of Ukraine has forced millions of people to seek refuge in the EU and, as the crisis continues, up to 6.5 million more people are expected to move. The EU and the Member States have strongly condemned the invasion and adopted prompt and unprecedented measures to assist people fleeing Ukraine.

Conflicts in other regions put additional strain on the EU’s capacity to manage borders and provide protection. In the aftermath of the Taliban takeover of Afghanistan’s government, in September 2021, Afghans became the largest group of applicants for international protection in the EU. Overall, in 2021 Afghans lodged about 97 800 applications for international protection in the EU and about 17 000 Afghans were apprehended crossing the EU borders illegally.

Beyond Afghanistan, unresolved conflicts in countries such as Syria and Myanmar continue to force people out of their homes and across borders. For example, in 2021 about 106 000 Syrians applied for international protection in the EU (while about 46 000 Syrians were apprehended crossing EU borders illegally). In addition to conflicts, the economic disruption created by the Covid-19 pandemic and frequent climate disasters are likely to push more people to migrate.

**Figure 30 – First-time asylum applications in the EU (main countries of origin)**

Food insecurity and migration

Russia’s war on Ukraine is disrupting the global supply of food and food production inputs, which is likely to exacerbate food insecurity, particularly in certain regions. Russia and Ukraine, combined, supply 30 per cent of wheat and 20 per cent of maize to global markets and Russia is the largest exporter of fertilisers. Around 40 percent of wheat and corn from Ukraine go to the Middle East and Africa, which makes the countries in the region particularly vulnerable to the crisis. This aggravates a pre-existing global trend of rising hunger and malnutrition caused by the Covid-19 pandemic. The surge in food prices and the threat of food shortages can cause social unrest and destabilising conflicts and force people to move. Whereas migration is a complex phenomenon involving a variety of push and pull factors, food insecurity can have an important effect on migration behaviour.

The European Parliament called for an urgent EU action plan to ensure food security inside and outside the EU in light of the Russian invasion of Ukraine. The European Commission presented a Communication on safeguarding food security and reinforcing the resilience of food systems.
Second, terrorists and other criminals could exploit vulnerabilities created by increased pressure on borders to enter the EU to recruit people, organise and perpetrate attacks. For example, the perpetrators of five of the ten terrorist attacks carried out in the EU in 2020 entered the EU as asylum seekers or irregular migrants.

The Taliban victory could make Afghanistan a new safe haven for terrorists and a regional base for launching attacks on the West. Moreover, the fall of Kabul may also provide a boost to jihadist networks in other regions. For example, sub-Saharan Africa remains particularly vulnerable to the threats of terrorism, violent conflict and fragile statehood and has recently become a global hotspot for jihadist activity.

Third, more foreign governments could instrumentalise irregular migration (or the threat of it) to destabilise EU borders or blackmail the EU. Recently, the government of Belarus orchestrated such a hybrid attack against the EU by sponsoring and encouraging irregular migrants to try to cross into the EU across the eastern borders. Whereas the number of irregular crossings at the eastern land borders remains low (about 8,000 irregular crossings detected in 2021), the situation led to several thousands of people being trapped at the borders and at least 21 reported deaths.

The risk of migration instrumentalisation is not entirely new. The EU’s strategy to externalise migration control tends to create dependence on third countries that might be exploited in the long run. For example, Turkey, which is host to at least 3.7 million refugees and agreed to prevent irregular migrants from crossing into the EU, has often used the threat of irregular migration to obtain financial resources and political concessions from the EU. In 2021, Morocco reportedly pushed thousands of people across the border to the Spanish exclaves of Ceuta and Melilla in response to a Spanish offer of hospital treatment for a rebel leader from the contested territory of Western Sahara.

WHAT NEXT? – Impact on the EU

Increased pressure at the external borders once again put the EU border management system to the test. In response to the crisis in Ukraine, the EU has, for the first time, activated the Temporary Protection Directive to grant immediate temporary protection in the EU to the people fleeing the war in Ukraine. The Commission put forward operational guidelines on external border management at EU-Ukraine borders, to help Member States' border guards to manage arrivals efficiently and assist people in need, while maintaining a high level of security checks. The EU agencies on borders and asylum have been available to provide support to Member States, including by deploying Frontex’s standing corps and migration management support teams.

After the 2015-2016 crisis, the EU embarked on a series of reforms aiming to strengthen its external borders. Progress has been made towards developing a European integrated border management (EIBM) system and establishing new border systems and capabilities, such as upgrading the EU architecture of information systems for borders and security, launching an interoperability framework to connect these systems, and extending the operational capabilities of Frontex. In the current context, the systematic security screening of people arriving at EU borders, in particular from conflict areas, will be essential to prevent jihadists from infiltrating into the EU. However, a lot of the recent changes have yet to be fully implemented on the ground to produce any concrete results. For example, there have been delays in implementing the interoperability of information systems. There are also concerns about Frontex's ability to provide enhanced support, and about the agency's role in alleged pushbacks at external borders. Moreover, reinforced border restrictions, entry bans and the suspension of asylum procedures, as seen during the Covid-19 pandemic, drastically limit people's ability to seek and access fundamental protection in the EU.

Efforts to reform the common European asylum policy have so far failed due to persistent disagreements between Member States on a solidarity scheme to ensure the fair distribution of asylum applicants in the EU. Whereas the new pact on migration and asylum rejuvenated these
efforts, the deadlock on key elements remains, including on the new proposal to establish a border screening procedure to distribute migrants swiftly to appropriate procedures. In the absence of concrete and rapid progress on asylum procedures, a potential increase in the number of applications could once again reveal imbalances in the system and undermine the EU’s capacity to provide international protection for people in need.

Stronger support exists for efforts to improve the EU return system and to enhance migration cooperation with key partner countries. However, success with such cooperation will depend on the EU’s capacity to provide credible incentives, which may go beyond EU visa measures (e.g. the suspension of the EU visa agreement with Belarus). Third countries generally seek more opportunities for legal migration, something that falls outside the EU’s competence. The new pact’s idea of partnerships may not be sufficiently appealing if these are to focus only or primarily on containment and deterrence of irregular movements.

Concerns about the management of external borders have already triggered several reforms of the Schengen Code. In response to persistent issues with the Schengen system, such as the prolonged reintroduction of controls at internal borders – which became widespread during the Covid-19 pandemic, in 2021 the Commission launched a new Schengen strategy, including a proposal to revise the Schengen evaluation and monitoring mechanism and a proposal to revise the Schengen Code. The Commission also put forward a proposal to deal with situations of instrumentalisation in the field of migration and asylum.

WHAT IF? – Three possible scenarios

Depending on the evolution of these risks and the EU response, three broad scenarios for the future can be described, ranging from most optimistic to most pessimistic.

A leap forward

In the most optimistic scenario, the unprecedented refugee crisis created by the war in Ukraine and the EU’s swift reaction could provide significant political momentum, which is necessary for finalising ongoing reforms. The pressure at the external borders would test and strengthen EU border management and newly established EU capacities, such as the European standing corps. Renewed concerns about irregular migration and security threats would allow the EU to implement recent changes, such as the update of the EU information systems for borders and security (and their interoperability). Progress on the reform of the EU asylum policies aiming to correct imbalances in the asylum system would enable the EU to live up to its fundamental rights obligations and values. A more comprehensive policy approach would help overcome administrative silos by further linking relevant policy fields. The reform of the Schengen system would bring about updated rules (including on dealing with health crises or hybrid attacks) and improve Schengen governance, thus helping to re-establish trust between Member States. A more balanced and integrated migration policy would allow the EU to engage more effectively with third countries to address all aspects of migration, while promoting fundamental rights and mobilising resources to address humanitarian crises and the root causes of migration, including climate factors.

More of the same

In another scenario, the EU would address the new migration and refugee crises within the existing policy frameworks and using ad hoc measures, such as pragmatic arrangements between Member States, hot spots and containment at or outside external borders. This would postpone the need to reach an agreement on significant reforms of asylum and migration policies. New pressures at the external borders would further delay the implementation of the European integrated border management policies. EU agencies might be brought in to provide more assistance, but at the price of diminishing accountability, democratic scrutiny, and compliance with fundamental rights. Over-reliance on third countries to contain irregular migration would leave the EU vulnerable to political
pressure and attacks and might negatively affect fundamental rights. Schengen cooperation would survive, but Member States would continue to implement the rules flexibly or push for more flexible rules to allow existing practices to continue.

**Further deterioration**

The most pessimistic scenario would see the EU facing increasing migration pressure while still being unable to reform its migration and asylum policies. The initial solidarity shown at the outbreak of the Ukrainian refugee crises could gradually wear off as the economic and political costs of receiving great numbers of refugees become more visible. As tensions increase, Member States might go back on their promise to refrain from preventing secondary movements and decide to reintroduce controls at internal borders. This would further weaken efforts to strengthen Schengen cooperation and undermine the EU’s capacity to provide fundamental protection. Similarly, responding to migrant instrumentalisation with increased fortification of borders would fail to address the problem while punishing migrants and increasing their suffering. Failure to find common ground on asylum and Schengen reforms, even in the absence of massive irregular migration, could lead to a reversal of Europeanisation in these policy areas and even to a breakdown of Schengen cooperation.

**Figure 31 – Charting the impact of ‘further deterioration’ on four key factors**

![Diagram showing the impact of 'further deterioration' on four key factors]

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Policy responses (capabilities and potential action)
Climate-proofing the EU

The issue in short: The challenge and the existing gaps

Human-induced climate change is happening, and the impacts are being felt around the globe. As presented in the risk section above, global warming is increasing the frequency and intensity of extreme weather events and altering standard seasonal climatic conditions in some regions. This results in multiple threats to people, property and society overall.

With current projections, the agreed goal of the universal Paris Agreement to limit global warming to well below 2, preferably to 1.5 degrees Celsius (°C) compared with pre-industrial levels, will be missed. The difference between 1.5 °C and 2 °C is significant as it pertains to the threat of climate change impacts. An overshoot of the 2 °C goal is likely to result in long-lasting and irreversible risks, including loss of ecosystems and potentially tipping point events leading to a significant change in the world's physical climate system.

In the sixth assessment report (2021) of the Intergovernmental Panel on Climate Change (IPCC), five emission scenarios are presented along with their associated warming projections over time. Only the low or very low emission scenarios are considered capable of keeping global warming within the 2 °C goal. All scenarios are expected to overshoot the 1.5 °C ambition in the 2041-2060 period. It is important to note that for the very low emission scenario, the overshoot is expected to be minimal and temporary, with global warming reverting below 1.5 °C towards the end of this century.

Considering the potential cascading effects on people, the economy and societal systems from changing climatic conditions and volatile climate phenomena, as presented in the risk scenarios on page 25, and supported by the February 2022 IPCC report on impacts, adaptation and vulnerability, the EU must ensure policy responses suitable for the challenges ahead.

Policy responses need to mitigate the root cause of the increased risks – climate change – and at the same time build resilience and preparedness at all levels of society, thereby reducing vulnerabilities.

The EU is a frontrunner when it comes to climate action and is increasingly stepping up its efforts in the field of sustainable finance; on both accounts, international cooperation is however crucial. In an interconnected global system of different players and agendas, driving forward a transition while attempting to build resilience to systemic risks is an ever-evolving challenge. The scale of the task to increase overall systemic resilience becomes evident when reading also the chapters on 'greater strategic autonomy for European industry' and 'consolidating strategic ties with democracies'.

The turn of events currently witnessed with Russia's 2022 invasion of Ukraine leaves the EU at a critical junction. The security risk associated with EU's dependence on Russian energy sources has become all too evident. Many call for an immediate stop of energy imports from Russia, but how fast is it feasible to divert into other sources, and what will they be?

In a world where inaction and prolonged policy processes on climate change have been environmentalists’ main critique for years, will this sudden push to change Europe's energy dependence fuel a green transition, or undermine it?

Existing policy responses

The types of risks that policy responses need to address can be divided into three groups: first, the physical risks connected to loss of life or property because of extreme weather events; second, the transition risk to the value held in various types of assets in an economy under transformation; and third, potential systemic risks to the economic and financial systems. As seen in the extreme weather
events scenarios, physical risks can induce further transition risks and accumulate impacts that can ultimately pose a threat at the systemic level.

EU action

Climate action is established in Article 191 of the Treaty on the Functioning of the European Union (TFEU) as one of the objectives of EU environment policy. The EU and its Member States are signatories to the 2015 Paris Agreement, and major parts of the EU climate and energy legislative framework towards 2030 were revised between 2015 and 2018. As part of the European Green Deal (EGD), the EU Climate Law was adopted in July 2021, setting a new 2030 target on emissions reduction, and making climate neutrality by 2050 legally binding.

To align the climate and energy acquis to the now binding 'at least' net 55 % emissions reduction by 2030 compared with 1990 levels, the European Commission put forward 18 legislative proposals in its 'fit for 55' package in July and December 2021. The package includes, among other things, proposals to raise 2030 renewable energy as well as energy efficiency targets across the EU, to which the co-legislators – the European Parliament and Member States through the Council – would need to agree.

In terms of mitigating climate change, the EU Climate Law Article 4 further obliges the Commission to propose in a legislative initiative, following the global stocktake on climate action planned to finalise in 2023 (see below), a binding emission-reduction target for 2040. The proposal must be accompanied by a carbon budget report indicating the total volume of net greenhouse gas (GHG) emissions expected to be emitted in the 2030-2050 period, without jeopardising European commitments in the Paris Agreement.

The climate challenge poses risks to both natural and human systems at varying levels. Natural hazards mainly pose physical risks to people’s health and security as well as to property and assets. Civil protection cooperation is enshrined in TFEU Article 196 and the solidarity clause in Article 222, under which the Union and its Member States act in a spirit of solidarity if a Member State is the victim of a disaster. The EU’s civil protection mechanism (UCPM) is a key part of Europe’s efforts in disaster preparedness and response. The Copernicus Emergency Management Service lends support, via satellite imagery and geospatial data, to civil protection interventions. Recently the Council concluded that disaster preparedness and prevention measures needed to be strengthened in view of the threat of increased extreme events due to climate change.

Increasing the resilience of the EU’s economy and society to climate change requires large investments and improved risk management. This in turn demands a financial system resilient to climate change impacts. The EU has taken significant action in the field of green and sustainable finance. Before the 2020 European Green Deal investment plan, the 2018 action plan on financing sustainable growth, integrated by the 2021 strategy for financing the transition to a sustainable economy, laid down the foundations of the EU sustainable finance framework. The framework is based on three building blocks: the EU taxonomy; disclosures; and a toolbox including benchmarks, standards and labels.

The July 2020 EU Taxonomy Regulation, is the centrepiece of the EU sustainable finance architecture; its classification system helps to both channel investment into climate action, and guide the integration of climate risks into the management of financial institutions such as banks, insurance companies and pension funds. It plays a pivotal role for legislative and non-legislative initiatives in areas such as labelling, disclosures and prudential rules. The EU taxonomy is established through delegated acts, determining which activities should be considered as sustainable and contributing to the fight against climate change, and be reported as such. The European Parliament is currently scrutinising a delegated act in which the Commission proposes to consider as eligible certain activities in the nuclear and gas sectors.

EU regulatory and non-regulatory initiatives on disclosures aim to improve transparency on risk factors, including climate risks and their effects on financial stability. In this domain, the Sustainable
Finance Disclosure Regulation came into effect in March 2021, while the Corporate Sustainability Reporting Directive (CSRD), presented by the Commission in April 2021, is at an advanced stage of negotiations between the co-legislators. In the meantime, sustainability reporting is regulated by the Non-financial Reporting Directive, which entered into force in December 2014, supported by the guidelines on reporting climate-related information, published in June 2019. In the toolbox, the EU Climate Benchmarks Regulation has applied since April 2020, and the July 2021 proposal on an EU green bond standard is with the co-legislators. Both aim to ease the development of sustainable investments, while preventing greenwashing.

EU action to improve the financial sector’s resilience to climate risks also includes the review of EU banking rules (the Capital Requirements Regulation (CRR) and Directive (CRD IV)), and the review of the EU insurance rules (the Solvency II review), both proposed by the Commission in autumn 2021. The Commission proposals, currently examined by the co-legislators, ask banks and insurance companies to systematically identify, disclose and manage sustainability risks, i.e. environmental, social and governance (ESG) risks, as part of their risk management. While larger EU insurers have already had to conduct climate scenario and stress tests, the new proposal is set to embed climate risk analysis in most insurers. In April 2021, the Commission amended existing delegated regulations under Solvency II and the Insurance Distribution Directive to ensure integration of sustainability factors and risks in (re-)insurance undertaking’s management, products and services.

In the banking sector, the European Central Bank (ECB) is increasingly considering climate change in its activities of banking supervision and monetary policy. After publishing a guide on climate-related and environmental risks for banks in November 2020, and the state of climate and environmental risk management in the banking sector in November 2021, the ECB launched in January 2022 a supervisory climate risk stress test to assess how prepared banks are for dealing with financial and economic shocks stemming from climate risk. In July 2021, the ECB presented its action plan to include climate change considerations in its monetary policy strategy, which should deliver macroeconomic modelling and assessment of implications for monetary policy transmission, and statistical data for climate change risk analyses.

Given the key role played by the insurance sector for financial stability and resilience to climate risks, the European Insurance and Occupational Pensions Authority (EIOPA) has made sustainable finance a strategic priority in its 2022-2024 work-programme. Its aim is to increase the insurance sector’s climate resilience by acting in key areas of activity: prudential framework, risk assessment, disclosures, supervision, climate protection gap, use of open source modelling and data, and international convergence. In addition, EIOPA will conduct centralised climate stress tests in the (re-)insurance sector, as tasked by the Commission.

National level initiatives

In the EU, several Member States had adopted national climate laws before the adoption of the EU Climate Law. Some have set higher 2030 targets or aim to reach climate neutrality sooner than 2050.

Member States and the sub-national levels play a key role in building resilience to climate change impacts, whether it concerns urban planning, public expenditure, construction and industrial permissions, nature conservation, or disaster preparedness and response capacities and training. To foresee risks and ensure resilience adequately requires know-how and the latest data on risk assessments, considering future climate projections. In the EU, Member States and institutions share these kinds of insights on the Climate-ADAPT platform and collaborate through the UCPM’s knowledge network and joint exercises to support national-level preparedness. Research and innovation for resilient cities and implementation of nature-based solutions often occur at national and sub-national levels, while key climate partnerships in various sectors are driven by countries in which the sectors are most prevalent.

Russia’s war on Ukraine has highlighted the vulnerability of the EU’s energy supply dependency on Russia, with Denmark being the first Member State to announce its ambition to phase out Russian
gas supply completely as soon as possible. On 8 March 2022, the Commission adopted the RePowerEU communication presenting the aim to wean Europe off Russian gas. It includes measures to be implemented at the national and citizen levels, such as energy savings, rooftop solar panels, and heat pump installation. Accelerating renewables, in particular hydrogen for industry, and strengthening the internal energy market interconnections while increasing gas storage are other key measures. The national level will play a pivotal role, as under TFEU Article 194(2), Member States have the right to decide on their own energy mix and supply structures, which only unanimity among Member States in the Council can affect (Article 192(2c)). Key projects would not only include accelerated renewables roll-out, but also seek to increase resilience through cross-border connections, such as from the Iberian peninsula to the continent, or gas pipeline connections for example to Poland.

**Figure 32: Key measures in efforts to climate-proof the EU**

**EU action with external partners/international organisations**

The United Nations Framework Convention on Climate Change (UNFCCC) was established in 1992 to prevent dangerous climate change. Continued climate negotiations have so far not been successful in halting global GHG emissions or the associated global warming. The 2015 universal Paris Agreement – with its specific targets to limit global warming, and sections on mitigation, adaptation, and financial support and mechanisms to support the work – was a breakthrough in UNFCCC negotiations. However, only at the 26th Conference of Parties (COP26) to the UNFCCC, held in Glasgow in November 2021, was the Paris rulebook for implementation finalised. The EU has taken significant steps to influence the transition not only internally but also externally, and actively negotiates for increased climate ambitions globally. The February 2022 Council conclusions called on EU climate diplomacy to support third countries in developing carbon markets and further step up its work to turn intentions into implementation through green partnerships and alliances. The Council repeated the EU’s intention to provide further climate finance, including through the Global Gateway initiative, to build resilience and stability in vulnerable third countries, urging partners to contribute.

Against the backdrop of the latest IPCC warnings, COP26 in the Glasgow Climate Pact named this decade the ‘critical decade’ during which accelerated action must be ensured. Under Article 14 of the Paris Agreement, a first global stocktake will be undertaken in 2023 to assess collective progress to achieving the agreement’s purpose and deliver on its targets.
In October 2019, the EU and seven third countries launched the International Platform on Sustainable Finance (IPSF) with the aim to exchange best practices, compare initiatives and enhance international cooperation. Together, the current 18 IPSF members represent 55% of GHG emissions and global gross domestic product (GDP), and 50% of the world population. The EU is also present in the Network for Greening the Financial System (NGFS), a group of more than 100 central banks and supervisors worldwide working to share best practices on climate risk management in the financial sector. EIOPA is also member of the International Association of Insurance Supervisors (IAIS), and of the Sustainable Insurance Forum (SIF), international networks of insurance supervisors and regulators working to integrate climate risks into their activities and into the insurance sector.

Obstacles to implementation
Geopolitical events can reframe the assessment of risks and their impacts, and may thus significantly redirect certain policies. Russia’s invasion of Ukraine has led to the RePowerEU communication, which aims to accelerate renewables, but will also heavily invest in energy security measures (see Chapter 18 on energy security). This risks further lock-ins to new gas supplies or investment to increase new pipeline capacities, or postponement of coal’s phase out, potentially creating further lock-ins, ultimately slowing the green transition. EU leaders and co-legislators will need to balance the desire to cut energy dependence from Russia with the risk of undermining the business case for future energy autonomy through renewables.

Furthermore, climate change’s threat to global food security is exacerbated by the war between two countries that together supply 29% of global wheat exports. Disrupted food and fertiliser supply chains could weaken the environmental integrity of the expected EU taxonomy delegated act on agriculture because of food security concerns raised, while other world events could affect future delegated acts.

The EU has been a consistent actor on mitigating climate change, delivering well beyond its 20% GHG emissions-reduction target for 2020 compared with 1990. The efficacy of the Union’s climate policies internally may however weaken its climate-diplomacy position externally. Over the past 30-year period, the EU has gone from a 15% share of global emissions to around 8% in 2018. Only significant global action will change the current global warming trajectory.

The EU’s share of global emissions is production-based; this does not take import-related emissions from trade into account. The need to address also consumption-based emissions becomes evident when looking at the difference in emissions reduction achieved depending on the variable chosen. Beyond the multilateral level in the UNFCCC, the EU has taken steps through its trade agreements, but also in legislative proposals such as the ‘fit for 55’ package, the carbon border adjustment mechanism (CBAM), and the proposal to limit EU-driven deforestation so as to address the overseas emissions and negative climate impacts of trade to the EU.

Energy-related investments, including transport, will need an estimated additional annual €350 billion to meet the EU’s 2030 emission-reduction target, alongside the €130 billion needed for other environmental goals. These amounts are too big to be covered by public funding; a flow of private capital is needed to close the gap. The EU has taken significant action to facilitate this, and it is considered a global leader in mainstreaming climate factors in the financial system, thanks also to innovative sustainable finance regulations. The future success of the EU in this field will depend to a great extent on the EU taxonomy’s fate. Any possible obstacle to its development can jeopardise the implementation of many other sustainable finance instruments, strictly dependent on its pivotal role. As the European Court of Auditors has noted, the effectiveness of the EU taxonomy and labelling schemes will largely depend on their voluntary take-up, and whether their credibility is backed up by adequate verification. This may prove challenging given the number and complexity of taxonomy criteria. Competing taxonomies or other jurisdiction standards pose a risk to the EU taxonomy’s impact on global investment trends. In this, the taxonomy’s complex structure, and the need to update it continuously according to the scientific and technological evolution, could affect
its usability and become its Achilles' heel. Other challenges could come from the need to ensure alignment with sectoral regulations, and from the risk of greenwashing or potentially pursuing other policy objectives.

**In focus: The role of data in climate-proofing**

Data are crucial to improve climate resilience and crisis preparedness, as they enable better accuracy of climate risk assessment, forecasting and modelling, and are key to early warning systems. Some datasets provide insights on extreme climate events, shedding light on direct and indirect causes, behavioural trends and consequences, such as loss of life, damage to infrastructure, and costs of emergency response and recovery. Others can help analyse the protection gap by measuring hazard (intensity and frequency of events), exposure (assets that are present at the location involved), vulnerability (susceptibility of the objects to the impact) and insurance coverage.

The 2021 EU climate adaptation strategy announced a series of initiatives to collect more and better climate intelligence data, and to make them available to policy-makers, supervisory authorities, and financial and economic actors (including citizens). The aim is to make any new investment and policy decision climate-informed and future-proof. Among other things, the Commission will extend the scope of public access to environmental information in the INSPIRE Directive to include climate-related risk and losses data. It will promote and support the use of its risk data hub to harmonise data recording and collection, and promote national-level public-private partnership.

Insurance companies have been collecting data and developing risk-zoning mapping systems for decades, and so the Commission has tasked EIOPA with exploring – alongside the industry – how best to improve the collection of uniform and comprehensive insured loss data, not least through its catastrophe risk expert network. EIOPA aims to provide open access through a data hub for the European level.

Digitalisation and technological innovation, such as big data, artificial intelligence, machine learning, high-performance computing, geospatial mapping and the internet of things, can help to enrich the variety and quality of data available and their analysis, including through capturing and developing continuous data flows and information. The Commission is delivering on this by means of initiatives under its priority 'A Europe fit for the digital age' and through financing research projects, as for example on climate intelligence. Among others, the EU data act, which the Commission proposed in February 2022, aims to provide means for public-sector bodies to access and use data held by the private sector that are necessary for specific public-interest purposes, for instance to develop insights with a view to responding quickly and securely to a public emergency.

**Policy proposals by experts and stakeholders**

To build resilience against ‘green swan’ events as presented in the risk paper on page 26, Finance Watch proposes to use the Prudential Regulation’s pillar I – capital requirements with regard to capital reserves as the most effective tool among the three prudential pillars. More specifically, Finance Watch proposes to increase the risk weight for exposures to fossil fuels both in the banking (CRR II) and the insurance sectors (Solvency II). Finance Watch asks the Commission to promote the adoption of similar prudential requirements globally, as well.

When it comes to addressing the protection gap in the insurance sector, Insurance Europe considers it necessary to make tackling under-insurance of natural climate risks a priority for Member States. Insurance Europe suggests establishing more public-private partnerships to share insights, and having Member States actively promote insurance as a way to providing cover for natural perils.

A 2021 collaboration between Carnegie Europe and the Open Society European Policy Institute produced an in-depth report on EU climate security in a global world, exploring how the EGD’s multiple strands should link more directly with EU external action to deliver on the EU’s commitment to be a stronger geopolitical player. The report identifies various shortcoming in the EU’s approach to climate security and climate action through its external relations, and proposes ecological diplomacy adjustments in four areas, ultimately referring to the need for – and the EU's
responsibility in – bringing this about and resetting the global architecture for international cooperation.

The combined threat to food security from climate change and the war in Ukraine have led Copa-Cogeca to suggest crop cultivation on all available land as part of an EU food shield. The aim is to prevent disruptions in the food supply chain, although this would likely undermine carbon sequestration, while the increased production would increase GHG emissions from agriculture. On 23 March 2022, the Commission decided to derogate from greening obligations temporarily and allow for food crop production on fallow land that is part of the 2022 ecological focus areas.

Position of the European Parliament

The European Parliament has spoken out on the need to fight and contain the threat of global warming before it is too late. Across various resolutions, the Parliament has consistently highlighted the need for strong climate diplomacy, calling for increased global ambitions faced with the ongoing climate and environment emergency. As co-legislator, the European Parliament will have a key role in ensuring a legal framework fit to deliver the climate targets set in the Climate Law, and build resilience through other related files from the EGD. In its 2018 resolution on the Commission action plan on sustainable finance, the Parliament agreed on the financial sector’s essential role as regards sustainability, and on the need for policies to correct market failures. It pointed out that the inaccurate assessment or misleading presentation of climate and other environmental risks of financial products can constitute a risk to market stability. The Parliament also emphasised that the identification, management and disclosure of these risks are an integral part of consumer protection and financial stability, and should therefore fall under the mandate and supervisory duties of the European supervisory authorities. In its climate diplomacy resolution, the Parliament said it was ‘convinced that an EU financial system which contributes to climate mitigation and incentivises investments in clean technologies and sustainable solutions will be a role model for other countries and could help them to implement similar systems’.

Through a legislative own-initiative resolution adopted in October 2020, the European Parliament called on the Commission to propose an EU legal framework to halt and reverse EU-driven global deforestation. The legislative proposal has in the meantime been tabled, as mentioned above, and contains several of Parliament’s recommendations. In March 2021, the Parliament adopted an own-initiative resolution on the CBAM, ahead of the Commission proposal. Parliament stressed the role of the CBAM in helping to reach climate objectives and finance the delivery of EGD ambitions.
### Possible action

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### Proposals submitted by the European Commission / ongoing processes

| 3 | Energy and climate legislative framework (Fit for 55 and taxonomy files) | Commission | Ensuring a legal framework that delivers a feasible trajectory towards climate neutrality. Includes the fit for 55 package and taxonomy delegated acts, but also the future 2040 emission-reduction target. | Commission website on 'Delivering the European Green Deal' |
| 4 | Insurance framework to close climate protection gap | Commission/EIOPA | Development of a framework that allows for the use of insurance against climate risks. | Council conclusions EU climate change adaptation strategy, COM(2021) 82 |
| 5 | Resilience and output of global multilateralism | European External Action Service (EEAS), Commission | Climate diplomacy, global sustainable trade agreements and border mechanisms – global green taxonomy, global carbon markets, stepping up EEAS diplomacy | Joint communication and Council conclusions of February 2022 Carnegie Europe report |

### Policy suggestions from think tanks and academia / policy examples from third countries

| 6 | UN Climate security mechanism | COM/ Council/ Member States | Promote stability in climate-vulnerable areas and provide support through, training, adaptation, risk awareness, disaster response and early-warning systems through multilateral collaboration. | Carnegie Europe report above for a broader EU perspective than current UN mechanism Supported in February 2022 Council conclusions on climate and energy diplomacy |
| 7 | Financial sector: Prudential Regulation | COM | Consider climate risks in capital requirements (banking and insurance sectors) | Finance Watch report, November 2021 |
| 8 | Insurance sector: public-private partnerships | Insurance Europe | Setting public-private partnerships for sharing expertise, data and experience | Climate resilience report |
Building a European social model for the 21st century

The issue in short: the challenge and the existing gaps

The European Union already has an outstanding level of social security compared to the rest of the world. While the EU constitutes less than 6% of the world's population and 20% of global gross domestic profit (GDP), it accounts for at least 40% of global public spending on social protection. According to Eurostat, in the EU-27 in 2020, expenditure on social protection stood at 22.0% of GDP, at 41.3% of total global public spending and at €2,943 billion. While the European social model is undoubtedly a unique achievement, it has to be adapted to the challenges of the future to maintain its long-term sustainability.

The coronavirus pandemic, and the ensuing healthcare and lockdown measures taken to limit its spread had far-reaching and lasting consequences for the economy, as well as for society. Forced closures and reduced economic activities led to income losses (and, as a consequence, in-work poverty) or unemployment for a significant part of the population. In some cases, tax-benefit systems and support measures such as short-time work schemes significantly reduced losses in disposable income. However, some households lost a significant part of their income and were exposed to the risk of poverty. They also had to cope with work-life balance problems and a sudden need for adequate digital equipment for teleworking and home-schooling. Social groups who were already vulnerable before the coronavirus – such as migrants, poorer communities and disabled people – were disproportionately impacted by the lockdowns and other responses deployed to tackle the health crisis.

The pandemic has accelerated digitalisation and automation and exacerbated tendencies, problems and risks related to them. Many companies and self-employed people chose to go digital, with a rapid uptake in teleworking, which turned out to be an especially viable option for office employees, despite having its own challenges (for instance the need for technical equipment and technical support, or time management and work-life balance problems). Analysis shows that more highly educated and urban populations (in particular in capital regions), were better placed to work from home. Companies have accelerated the digitalisation of their customer and supply-chain interactions and their internal operations by three to four years. The share of digital or digitally enabled products in their portfolios has accelerated by seven years.

The rapidly increasing digitalisation raises a series of questions and brings new challenges, in terms of the need for equipment and infrastructure (such as computers and other hardware, broadband internet), but also for at least basic digital skills. In this respect, statistics show growing inequalities between areas, skill levels, age groups and sectors, further disadvantaging, for instance, workers living in rural areas, older workers with a lower level of digital skills, or those who cannot afford adequate digital equipment. According to data from the Digital Skills and Jobs Coalition, about 42% of Europeans today still do not have a basic level of digital skills. Upskilling and reskilling of workers, especially as regards to digital skills is therefore essential. Without upskilling measures adapted to individuals' needs and opportunities, an insurmountable gap could emerge between social and age groups, as well as between regions or among Member States.

The EU population is also ageing. The decline in the numbers of live births and increasing longevity are changing steadily the population's age profile. Consequently, the old age dependency ratio is on the rise, meaning that EU social security pension systems of the EU have to be reconsidered. The
question of setting a minimum wage framework to close regional gaps is one of the most analysed and debated economic topics in recent years.

The pandemic and the related healthcare and lockdown measures also accelerated the spread of new forms of work: platform work or on-call or portfolio work, for example. To protect workers in atypical work forms from higher risks of unemployment and uncertain social security during crises, stronger emphasis could be placed on the legislation for non-standard work forms and for the self-employed, who were, according to data, the most affected by the pandemic.

Existing policy responses

The European Pillar of Social Rights (or ‘Social Pillar’) was jointly proclaimed and signed by the European Commission, the European Parliament and the Council at the Gothenburg Social Summit in November 2017. It aims to uphold 20 principles and rights, structured around three categories: equal opportunities and access to the labour market; fair working conditions; and social protection and inclusion. The Social Pillar is accompanied by a Social Scoreboard, which initially had 14 headline indicators and 21 secondary indicators in 12 areas, measuring progress in the EU Member States in relation to the principles. The scoreboard was used for the first time in the 2018 European Semester, one of the main parts of the EU's economic governance framework. In June 2019, as part of the Pillar's roll-out initiatives, the European Parliament and Council adopted the Directive on transparent and predictable working conditions, addressed insufficient protection for workers in more precarious jobs, while limiting burdens on employers and maintaining labour market adaptability.

In November 2019, the Council adopted the Recommendation on access to social protection for workers and the self-employed. It stresses that 'in some Member States, certain categories of workers, such as short- and part-time workers, seasonal workers, on-demand workers, platform workers and those on temporary agency contracts or traineeships are excluded from social protection schemes'.

In response to the pandemic's impact and its implications for health policy, the social sphere and the labour market (un- and underemployment, social security system inadequacy, lack of social protection of workers on non-standard work forms), the Commission launched a new recovery plan on 27 May 2020. This plan highlighted the necessity of a fair and inclusive recovery, paying particular attention to fighting unemployment, improving skills (including digital skills), supporting pay transparency and a fair minimum wage, and taking further steps against tax evasion and avoidance.

In March 2021, the von der Leyen Commission published an action plan on the Social Pillar, setting out concrete initiatives to implement its principles. The action plan called for the mobilisation of all available EU policy tools, ranging from funding programmes and the European Semester, to legislation and policy recommendations in support of Member States' actions. The action plan also revised the Social Scoreboard to reflect the current political priorities and the recent and upcoming initiatives. It also proposed headline targets for 2030, namely bringing the proportion of people aged 20 to 64 in employment up to at least 78%, increasing the percentage of adults who participate in training every year to at least 60%, and reducing the number of people at risk of poverty or social exclusion by at least 15 million. The responsibility for delivering on these targets is shared by the EU institutions, national, regional and local authorities, social partners and civil society. Funding will be ensured via the 2021-2027 multiannual financial framework and Next Generation EU, in particular the Recovery and Resilience Facility, with monitoring under the European Semester. Concrete initiatives in the framework of the action plan include an EU strategy on the rights of the child together with a European child guarantee scheme; a recommendation on effective active support for employment after the coronavirus crisis (EASE); and a platform of collaboration against homelessness. The European Commission also published a proposal on improving the working conditions of platform workers on 9 December 2021.
The European Commission put forward several initiatives to fulfil its objective of a European education area by 2025. Following the new European skills agenda and the European education area communications, adopted respectively in July and September 2020, the Commission issued two key proposals in December 2021. These aim at improving lifelong learning and employability and reducing skills mismatch and include: a Council recommendation on individual learning accounts, which should help 'close existing gaps in the access to training for working age adults and empower them to successfully manage labour market transitions', and a European approach to micro-credentials, with the goal of empowering workers 'to up- and reskill throughout their entire lives and making sure that all learning experiences are properly valued'. The new digital Europe programme will contribute to advanced digital skills development, while the updated Digital education action plan 2021-2027 aims at improving digital skills for all — a need made clear during the coronavirus crisis, with technology used at an unprecedented scale in education and training.

The increase in telework and digital platforms also raises issues of privacy and data use. At EU level, employees' privacy is already protected by the General Data Protection Regulation (GDPR), which requires employees' consent for the use of tracking software or applications. The issue is also raised in the proposal on improving working conditions for platform workers, which pleads for transparency in digital labour platforms' use of algorithms, by introducing a requirement for human monitoring to ensure fairness and accountability in algorithmic management, as well as the respect of working conditions.

**Figure 34: Building a European social model for the 21st century**

Source: EPRS.

In the context of the economic and social crisis engendered by the Covid-19 outbreak, a minimum wage is increasingly considered a useful instrument to ensure fair wages and social inclusion. On 28 October 2020, the European Commission published a proposal on fair minimum wages. The proposed directive aims at promoting collective bargaining on wages in all Member States. For the countries where statutory minimum wages exist, it aims at ensuring that Member States put in place conditions to set statutory minimum wages at adequate levels, while taking account of socioeconomic conditions, as well as regional and sectoral differences. Furthermore, the proposed directive aims at promoting compliance, as well as strengthening proportionate enforcement and monitoring in all Member States. The European Parliament adopted its report on 25 November 2021. Interinstitutional negotiations are ongoing.
National level initiatives

Social security systems can differ significantly from one Member State to another. National governments are free to determine the features of their own social security systems (benefits provided, conditions for eligibility, calculation of benefits, contributions to be paid). These systems are governed by Regulation (EC) No 883/2004 (currently under revision) on the coordination of social security systems with regard to sickness, maternity and paternity, family, invalidity, unemployment and pre-retirement benefits, and in respect of work-related accidents and diseases, and old-age pensions, as well as Regulation (EC) 987/2009 on the procedure for implementing the former regulation.

Member States can also decide on the scope of legislation on working conditions and social security coverage of workers. They decide whether and to what extent they include workers in atypical work forms, for example. Another example is the employment status of platform workers. The binary system (employed or self-employed) is challenged by the specific characteristics of platform work and bogus self-employment. Ireland, for instance, classifies workers on the basis of a series of tests laid down in case law, while Spain enacts a legal presumption that delivery platform workers are employees. The adoption of the directive on improved working conditions of platform workers will, however, unify this situation in the EU.

The implementation of the Social Pillar's principles is also primarily a task of the Member States, carried out in close cooperation with social partners and with the support of EU policy tools. These can be 'hard' tools (legislation and, economic governance), or 'soft' tools (policy development through mutual learning and guidance). Establishing the specific amount of a fair minimum wage, for instance, is a Member State competence, even if mandatory at EU level. Measures to combat demographic decline, or measures and initiatives to provide socially vulnerable people with adequate digital tools is also a Member State competence. Concerning upskilling and reskilling, in particular in the digital area, concrete initiatives are often taken at local or regional level, but backed by a series of EU plans, such as the digital education action plan or the skills agenda, and EU-funding, such as the European Social Fund Plus or the digital Europe programme.

Obstacles to implementation

With internet and digital technologies playing an increasingly important role in our daily lives, the digitalisation of Europe has become one of the EU's priorities for the coming decade. Yet while the EU is making good progress towards its digital transformation, progress is uneven, with clear differences visible across Europe's regions. Even though closing this digital divide is of outmost importance, geographical conditions in some regions hinder the expansion of broadband internet or 5G, for instance in mountainous areas, on islands and in outermost regions. Peripheral regions are often also in a less financially advantageous situation, meaning digital development might be an insurmountable obstacle for them. People living in rural areas can also suffer from the paradox of the digital territorial divide: while rural areas need better digital connectivity to make up for their geographical isolation, they actually tend to have lower levels of digital connectivity, with the result that people living in these areas are less digitally connected.

Improving digital connectivity can also tackle tech poverty, (lack of access to technology, training, skills and experience needed due to lack of financial means). However, the digital upskilling of older people also encounters obstacles, such as a lack of access to digital devices or the internet, as well as a lack of skills, self-confidence, motivation and interest, and the onset of physical or cognitive impairments, making digital engagement more challenging.

Further continuing teleworking also poses some dangers. As remote work can be provided from anywhere (except for on-location services), it could lead to outsourcing and social dumping (hiring workers in Member States where wages are lower, or employing workers residing in non-EU countries). This can lead to unfair competition and could be prevented by legislative means.
Policy proposals by experts and stakeholders

*Bruegel* highlights that social protection arrangements vary greatly among EU countries in terms of efficiency, equity and universality, but also within Member States across different modes of work. For instance, portability of benefits between EU Member States already exists for employees under Regulations (EC) 883/2004 and 987/2009, but not for self-employed workers. Member States could therefore ensure that these entitlements are accumulated, preserved and transferable across all types of employment and different economic sectors – even when individuals accumulate several different employment statuses. The European Commission could also promote consensus and convergence among EU countries on the classification of self-employment, and could identify and promote best practices implemented by Member States. Due to digitalisation, work will be quite different from that for which academic training prepared people. According to *Bruegel*, this means that schools and training programmes will have to focus not only on the specific narrow skills needed for today’s jobs, but also on broader skills, such as foreign languages, which contribute to flexibility in the future, and that can be applied in many different ways.

Demographic changes mean the EU funding model for social protection is under threat, due to the declining share of the working-age population (contributing to the welfare system), compared to the increasing number of pensioners, who live longer. Under these conditions, it is difficult to expand social coverage to all forms of work (implying increased social protection costs), while there is a shrinking funding base. An unconventional solution, a *robot tax*, has been considered, inter alia by *Microsoft*. Such a robot tax could be then used to pay for the re-skilling of human workers who have lost their jobs due to automation. However, this idea is controversial, as it could also hinder innovation, reducing European competitiveness and possibly leading to distortions in relative investments in capital versus human labour.

Individual learning accounts (ILAs) are flagship actions under the new European skills agenda and important means to endorse lifelong learning. In its *position* on ILAs, stakeholders' association *Digital Europe* stresses that: ILAs should be available for all working-age individuals, but differentiated. They are financed through four sources: individual contribution, Member States' public funding, EU funding, and employers' contributions. Training systems within the ILAs should be specifically designed around adults' needs to conciliate work, private and family life.

Position of the European Parliament

The European Parliament has always been active in the development of EU action in the field of employment and social policy. Parliament has repeatedly called for a more active social policy, and has supported the Commission's proposals in this area. On 17 December 2020, the European Parliament adopted a *resolution* on ‘A strong social Europe for just transitions’. It called for a key social programme, including a strategic framework for achieving a sustainable, fair and inclusive social Europe by 2030. This means incorporating the social pillar within the EU Treaties and adding a protocol providing social rights at the same level as economic freedoms within the single market. It also involved the adoption of a sustainable development and social progress pact, to ensure social and sustainable targets are mandatory, which still has to be put in practice. It also stressed the importance of a revised European Globalisation Adjustment Fund.

The European Parliament has followed the situation of workers in atypical work forms closely in recent years. On 16 September 2021, an own-initiative *resolution* was adopted on ‘fair working conditions, rights and social protection for platform workers – New forms of employment linked to digital development’. The resolution pleaded for improved working conditions for platform workers, who should benefit from the same rights and social protection as other workers. Parliament argues that an employment relationship should be presumed in the case of platform workers, reversing the burden of proof. Platform workers should benefit from essential and transparent information regarding working conditions and the calculation of fees, and a healthy and safe working environment, with transparent algorithms and data management. The resolution also highlights the
right of platform workers to basic training to be provided by the platform and the importance of recognising their skills. The Commission proposal on 'Improving the working conditions of platform workers', published on 9 December 2021, includes essential points of the Parliament's resolution.

The spread of digital technologies and related forms of work, pressures of connectivity at any time and place and high workloads can lead to increased stress levels for workers. Directives at EU level could be useful to help protect workers' mental health, by securing a right to disconnect at specific times of the day. On 21 January 2021, the European Parliament adopted a legislative-initiative resolution, calling on the Commission to put forward a legislative proposal to secure the right to disconnect. In its resolution of 4 February 2022, on mental health in the digital world of work, the Parliament points out that the pandemic and increased use of digital technologies in the world of work exacerbated problems related to workers' mental health and emphasises the strong need for a comprehensive EU mental health strategy, taking a cross-sectional approach to mental health issues. In its resolution of February 2019 on a comprehensive European industrial policy on artificial intelligence and robotics, the European Parliament stressed that education curricula must be adapted to automation, including through the establishment of new learning paths and the use of new delivery technologies.

In October 2019, the European Parliament adopted a resolution on employment and social policies in the euro area, calling on the Commission to put forward a legal instrument to ensure that every worker in the Union has a fair minimum wage, which can be set according to national traditions, or through collective agreements or legal provisions. Following this resolution, the European Commission published a proposal on fair minimum wages on 28 October 2020.

**In focus**

*Digital technologies play an increasingly important role in our lives, and the Covid-19 pandemic further accelerated this phenomenon. However, as different parts of society are not able to adapt themselves in the same way and to the same extent to these technologies, existing social inequalities are also further accentuated. People in low-income households and those belonging to vulnerable social groups are statistically less likely to possess the required technologies (such as broadband internet) and devices than people with higher and more stable incomes. From the point of view of digital connectivity (infrastructure that is needed to deliver digital services) differences between Member States, as well as between different regions in the same Member State, or between rural and urban areas, are obvious. The adequate use of digital technologies requires at least basic digital skills. Demographic breakdowns underline these differences between generations. For instance, according to the Digital Economy and Society Index (DESI), 80 % of young individuals (aged 16-24) had at least basic digital skills in 2021. In contrast, only 33 % of those aged 55-74 and 30 % of retired or inactive people possess basic digital skills. There is a need to tackle the risk of an even broader digital divide in these groups. The twin transitions – digital and green – are central elements of the Recovery and Resilience Fund and to Europe's approach to recovering from Covid-19. Digital technologies have played an essential role in maintaining economic and social life throughout the pandemic and they are a key factor for a successful transition to a sustainable, post-pandemic economy and society. The RRF Regulation therefore requires that each Member State devotes at least 20 % of the allocation received for its Recovery and Resilience Plan (RRP) to measures fostering the digital transition and/or addressing the resulting challenges. Priority areas include investment in digital public services, digitalisation of businesses, and human capital (digital skills development and online learning, including digital skills in curricula). Other EU instruments that could help narrow the digital divide are the digital education action plan, as well as several actions under the updated skills agenda related to EU support for national upskilling and lifelong learning. It is also important to develop digital connectivity at EU and Member State level. The digital part of the Connecting Europe Facility (CEF Digital) will support and catalyse both public and private investments in digital connectivity infrastructures between 2021 and 2027. It will support investments devoted to safe, secure, and sustainable high-performance infrastructure, in particular Gigabit and 5G networks across the EU.*
### Possible action

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**Policy suggestions from think tanks and academia / policy examples from third countries**

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1. This ratio expresses the relative size of the older part of the population compared with the working-age population.

2. According to a definition, a company could pay income tax on each robot based on the displaced human employee's salary. Alternatively, a company could pay higher rates of corporation tax for using robots in their workforce from their profits, which are likely to have increased due to the powerful efficiency of a robotic workforce.
Strengthening our energy security

The issue in short: The challenge and the existing gaps

Defined by the International Energy Agency as ‘reliable, affordable access to all fuels and energy sources’, energy security is vital to the EU’s economy. However, lacking sufficient energy reserves of its own, the EU is critically dependent on imports. In 2020, these covered well over half (57%) of the EU’s energy needs – a figure which rises to 97% for oil and 84% for natural gas.

Heavy reliance on imports creates vulnerabilities. Past risks were highlighted by the 1973 crisis, when an embargo led by Arab oil producers caused oil prices to quadruple, resulting in high inflation, a deep recession and episodes of social unrest. In 2009, Russian gas producer Gazprom halted supplies through Ukraine, leaving several EU countries including Bulgaria and Romania with a severe shortfall for nearly two weeks in the depths of winter. Questions about the reliability of Europe’s main gas supplier were raised again in 2021, when Gazprom’s refusal to supply more than the contractual minimum left European reserves depleted and exacerbated a ‘gas crunch’, in which surging prices caused hardship to consumers and put dozens of energy companies out of business. Russia’s invasion of Ukraine in February 2022 threatens to further disrupt gas supplies to Europe. The war prompted Germany to suspend certification of the Nord Stream 2 pipeline, and obliged the EU as a whole to find ways to drastically reduce their reliance on energy imports from Russia. The European Commission has proposed a reduction of two-thirds in EU energy imports from Russia by the end of 2022. Reflecting these risks, the European Parliament/Normandy Region’s Normandy Index identifies energy insecurity as Europe’s main external vulnerability.

In the longer run, a major benefit of the transition to renewable sources, together with enhanced energy efficiency measures, is that Europe should become less dependent on imported fossil fuels. Nevertheless, short- and medium-term trends are rather less favourable. In view of the need to cut carbon emissions, most EU countries are phasing out coal use in power production, while post-Fukushima safety concerns have accelerated the end of nuclear power in several Member States. Nevertheless, there is a considerable way to go in terms of developing and commercialising energy storage technologies that can accommodate the variable nature of renewable energy production (in particularly solar and wind power). This means the EU will continue to rely on gas for heating and to a lesser extent for electricity production in the coming years. The transport sector in Europe is also far from decarbonised and heavily reliant on oil based products. Gas imports have in fact been rising as the EU’s own production dries up, with the main EU producing country (The Netherlands) intent on ending its gas production in 2022. Russia has become the EU’s main energy supplier in recent years, responsible for around 45% of gas and coal imports, and around 25% of oil imports. It is likely to remain Europe’s dominant supplier in the gas sector for some time, given that Norway and Algeria (the EU’s second and third largest suppliers) do not have the capacity to replace it, and it remains unclear how much gas the EU can expect to receive from gas fields in Azerbaijan. This means future supply diversification will rely heavily on Liquefied Natural Gas (LNG). LNG offers a key advantage over pipeline supplies because it can be more flexibly shipped in from a wider range of producer countries, including strategic allies such as the USA, without the need for pipelines. However, LNG is generally more expensive than pipeline gas, especially at times of high global demand, while its production and transport system makes it more polluting. Furthermore, access to LNG requires Member States to build dedicated import terminals and integrate these into their gas networks, as well as those of neighbouring countries.

Since the invasion of Ukraine in 2022, energy dependence on Russia has been highlighted as a major geopolitical risk for Europe, which also helps to finance Russian aggression, something that the EU needs to address collectively and as a matter of priority. Over the past 15 years, the EU has made...
some progress in terms of diversifying gas supplies and better integrating national gas markets (e.g. through enhanced interconnection capacity), so that supply disruptions can be addressed through burden sharing, reverse flows and other tools. This progress is underpinned by EU legislation on security of gas supply, intergovernmental agreements in the energy sector, and the third gas package. Reform of the third gas package and security of gas supply regulation lie at the heart of the hydrogen and decarbonised gas markets package, proposed by the Commission in December 2021, whose primary aim is to help gas markets deliver on the clean energy transition.

Whereas EU legislation has in the past focused on market functioning and diversification of supply, the more recent emphasis has been to transform energy markets in a way that aligns with the EU's ambitious climate goals. Rather less emphasis has been placed on the price of energy paid by consumers, with the assumption being that lower energy prices would naturally flow from sustainable, functioning and integrated energy markets. Yet as described in Chapter 3, energy prices in the EU rose sharply in 2021 due in large part to the economic recovery from the Covid-19 crisis, and have shot up even further in 2022 because of the Russian invasion of Ukraine. This has led to broader price inflation and a cost of living crisis. While guaranteeing physical energy supplies remains the highest priority, there are growing concerns about how energy is priced in the EU and the mechanisms in place to ensure that consumers (especially vulnerable ones) can afford their energy supplies. The risks otherwise are of growing energy poverty and negative impact on economic growth, as energy use accounts for a high and growing share of consumer spending.

**Existing policy responses**

**EU action**

The Security of Gas Supply (SoGS) regulation constitutes the main EU framework for ensuring that Member States plan and cooperate closely on security of supply and can support neighbouring countries in the event of a supply disruption. Potential policy responses under the SoGS regulation, which was revised in 2017, include closer regional cooperation over managing energy supplies in a crisis, physical diversion of supplies to help neighbouring countries, and prioritisation of essential services and supplies to households across the EU. Gas security in Europe is further enhanced by measures to ensure the EU has a role in scrutinising intergovernmental agreements and some commercial contracts in the energy field with third countries, and ensuring that EU law also applies to pipelines with third countries. While gas is the biggest concern in terms of security of supply, the EU also has legislation to ensure all Member States develop minimum oil reserves, and takes measures to guarantee security of electricity supply in the event of an unexpected disruption.

Growing national concerns around the rise of energy prices in 2021, discussed extensively in the European Council and in meetings of energy and finance ministers, led to the European Commission adopting a toolbox (October 2021) of targeted interventions that Member States could take to counter these price rises in a way that did not undermine the single market in energy. These include temporary reductions in energy taxes, social payments to vulnerable consumers, and actions to prevent disconnections such as a temporary deferral of payments. Furthermore, the Commission proposed a revision of the SoGS regulation that included greater coordination of gas storage at EU level and voluntary joint purchasing of strategic gas stocks. These suggestions were included as part of the hydrogen and decarbonised gas markets package in December 2021.

The Russian invasion of Ukraine in 2022 has pushed the issue of energy dependency to the fore, with a growing realisation that the EU can no longer rely on Russia as its main energy supplier, and should take concrete actions to curb its energy imports immediately. The Commission proposed a joint European action, entitled REPowerEU (8 March 2022), designed to reduce fossil fuel imports from Russia by 2/3 in 2022, with the goal of making Europe independent from Russian fossil fuels well before 2030. Permitted actions include a relaxation of state aid rules for businesses affected by high energy prices, the possibility of windfall taxes on energy companies that have benefited from the price crisis, and the diversification of gas supplies through greater LNG import capacity and the
delivery of alternative pipeline routes. The informal meeting of the European Council on 10-11 March 2022 issued the Versailles Declaration that seeks progress in reducing EU energy dependency on Russia in particular. On 23 March 2022, the Commission proposed an expedited and targeted revision of the SoGS regulation that would require all Member States to fill their gas storage levels to at least 80% of capacity by 1 November 2022 (rising to 90% in subsequent winters), introduce solidarity mechanisms between Member States when it comes to accessing stored gas, and require certification of all gas storage operators, including those owned by third countries (e.g. Russia). The overarching aim is to ensure that Europe can cope with any potential interruption of Russian gas supplies over the next winter. According to a 2022 report from the Agency for the Cooperation of Energy Regulators (ACER), actual gas in storage in the EU-27 was only around 20% of annual consumption (as at 1 October 2021), with filling-in levels of only 72% and particularly low storage levels in sites owned by Gazprom. The ACER report lends support to the idea of urgent EU action on gas storage.

Alongside these concerns about energy dependency, Member States are increasingly alarmed at the consequences of high energy prices (also an element of security of supply, according to the IEA definition), and some now strongly object to the marginal pricing model used for the EU electricity market, which sets the energy price according to the most expensive source used in energy consumption. In normal times, marginal pricing can be a transparent tool that is useful for incentivising renewable sources, especially those like solar and wind power with low operating costs. Yet in times of great market disruption, marginal pricing can mean that electricity users have had to pay high energy bills based on the cost of gas rather than the most common source for energy generation (e.g. nuclear energy in France). This has prompted several Member States to demand a more thorough overhaul of EU energy market rules, including a new system of setting energy prices that places a lower financial burden on consumers. In the European Council meeting of 24-25 March 2022, Member States agreed to fill in gas storage sites and phase out Russian oil, gas and coal imports as soon as possible, and work together on the voluntary common purchase of gas, LNG and hydrogen. Member States also agreed on the need for new measures to combat the rapid increase in energy prices, inter alia by calling on the Commission ‘to submit proposals that effectively address the problem of excessive electricity prices’.

Figure 36: Strengthening energy security

Source: EPRS.
National level initiatives

EU Member States have undertaken a number of actions to help their consumers, especially vulnerable ones, cope with a period of exceptionally high energy prices. This includes reductions in energy taxes, imposing price caps on energy bills, and making financial support available for more vulnerable consumers. The Bruegel think-tank has mapped out the various national policies that Member States are taking to address energy price rises. The war in Ukraine has prompted Member States to go much further and look for ways to sharply and rapidly reduce their dependence on fossil fuel imports from Russia. Some Member States such as France and Belgium have decided to prolong the life of nuclear reactors that are currently scheduled for closure, although Germany has taken a different approach and intends to continue with closing nuclear power plants but invest more heavily in renewables. Poland is accelerating its strategy to reduce dependence on Russian energy imports, ending its gas supply contract with Russia by the end of 2022 and replacing this with gas imports via its dedicated LNG terminal. Poland could also end its supply contract for Russian oil in 2023, and make more use of its indigenous coal resources to replace natural gas in the short term. Switching to coal is an option for other countries with coal reserves or coal fired power stations, even if the highly polluting effects of coal mean that its use needs to be completely phased out in the medium term. For its part Germany has suspended certification of the NS2 pipelines, and has authorised the development of new LNG import terminals, as important steps towards reducing its dependence on gas supplied from Russia. The big and ongoing question is whether the EU as a whole will cease all energy imports from Russia, and thus follow the line taken by the USA and the Baltic States inside the EU.

EU action with external partners/international organisations

The EU’s 2016 Global Strategy makes it a priority to ‘strengthen relations with reliable energy-producing and transit countries’. The Commission will adopt a new EU strategy on external energy relations in May 2022, which should take into account REPowerEU and the broader European response to the war in Ukraine. Two important multilateral frameworks for EU external energy relations are the International Energy Agency, which the EU participates in directly through the Agency’s Governing Board, and the Energy Charter Treaty (ECT), that governs commercial relations between energy producing and consuming countries. Whereas the IEA is a valuable forum for energy dialogue and research, its membership is limited to OECD countries that are mostly net energy consumers. The IEA has an important role in monitoring emergency oil stocks and releasing these to guarantee security of supply, but it does not have comparable powers to ensure security of gas supply. The ECT represents both net energy producing and consuming countries, but its membership is geographically limited and many major energy suppliers (e.g. Russia, Norway, Australia) and net consumers (China and most Asian countries) are not parties. The EU is seeking to reform the ECT in a way that would make it more compatible with the green energy transition and more effective in addressing problems relating to increasingly globalised energy markets.

Since 2006, the EU has been part of an Energy Community with neighbouring countries (currently, the six western Balkan countries that are not EU Member States together with Ukraine, Georgia and Moldova), several of which are important transit countries for EU gas supplies from Russia and Azerbaijan, and face similar challenges to the EU in terms of dependence on Russian imports. Energy Community members have adopted key European energy laws, such as the second and third legislative packages on gas and electricity markets, helping them to become more energy secure and integrate at least partially with the EU’s internal energy market. However, there is still a long way to go: as of 2021, member countries had implemented just over half of the laws included in their Energy Community commitments.

Given the tense state of relations with Moscow, the EU is now actively seeking to reduce its reliance on energy supplies from Russia. Germany has already taken an important step in this direction by not approving the Nord Stream 2 pipeline for operation (see in focus). The EU has nevertheless maintained bilateral energy dialogues with several other supplier and transit countries, such as
Algeria, Turkey and Azerbaijan. The EU has significant energy cooperation with Ukraine; in 2019 it mediated a five-year gas transit agreement between Kyiv and Moscow, while Ukraine is a leading member of the Energy Community and has become more closely aligned with the EU energy acquis. In 2021, Germany committed to establish a Green Fund in support of the Ukrainian energy sector, with at least US$1 billion of investments, as part of an agreement with the US. This could be a useful template for future EU support for the Ukrainian energy sector.

Obstacles to implementation

There is no legal obstacle to strengthening energy security at EU level - this is a specific EU competence under Article 194 TFEU, which provides an explicit legal basis for EU energy policies. Yet competence over the structure of energy supply, the choice of energy sources ('energy mix'), and the conditions for exploiting energy resources, all reside with the Member States (also according to Article 194 TFEU). Member States are therefore primarily responsible for ensuring security of supply within their territory. The focus of EU action - such as the SoGS regulation - is to ensure that Member States do not penalise neighbouring countries when they take legitimate measures to guarantee their own energy supplies, and come to their support if supplies are interrupted.

The extent to which EU energy systems are coordinated is also a matter of political will. Member States remain free not only to decide which energy sources to use (or prohibit), but also how to organise their infrastructure and secure their own (usually bilateral) contracts with supply countries. While the EU now has a scrutiny role over intergovernmental agreements and some commercial contracts in the energy field, and has developed the right to apply single market rules to pipelines with third countries, this remains far from the pooling of energy sovereignty that may now be necessary at EU level. Given the secular decline in EU fossil energy production, Member States have sometimes sought to jostle for preferential relations and contractual terms with supply countries, leading to policy choices that are not consistent with Europe's long term interest and which has so far prevented the EU from effectively speaking with one voice in external energy relations.

Past disputes between Member States over the Nord Stream 2 pipelines highlight the extent to which Member States' decisions on energy infrastructure could become politicised and negatively impact EU security of supply. The Russian invasion of Ukraine in 2022 brought into relief the close interdependency and common challenges faced by Member States in the energy field, as well as the common need to reduce dependency on energy imports from countries that constitute a geopolitical threat to Europe. Perhaps the Ukraine crisis will deliver the political will that is necessary for Member States to coordinate more closely on their energy mixes and supply infrastructure, take strategic decisions in close consultation with their neighbours, and map a path out of energy dependency that is compatible with the transition to climate neutrality by 2050. This will necessarily include the promotion of renewable energy sources and energy efficiency measures that can sharply curb imports of fossil fuels and promote cleaner alternatives. It is now even more evident that for the EU and its Member States, climate action and energy security are two sides of the same coin, and concerted actions to support one will in the longer run reinforce the other.

Policy proposals by experts and stakeholders

The think tank Bruegel has set out scenarios for how Europe could prepare for a winter without Russian gas supplies. Bruegel argues that even limited Russian gas imports bolster Gazprom and thus support the Putin regime. No Russian imports is a possible scenario that could be realised by maximising alternative pipeline supplies, LNG imports and storage capacity, although even this along would be insufficient to fully replace Russian gas supplies. Diversification of supply would therefore need to be accompanied by a sharp decrease in energy demand, which can be achieved by greater energy efficiency, lower heating, and prioritising certain types of energy demand above
others. Similarly, Bruegel argues that cutting off Russian coal and oil imports would lead to a temporary adjustment that is painful but would ultimately be better than continued dependence.

The International Energy Agency argues that Europe can cut its dependence on Russian gas (currently at 155bcm per year) by around a third (50 bcm) within a year, according to its 10-point plan. The IEA proposes not signing any more contracts for Russian gas and doing everything possible to diversify supply routes. This must be accompanied by ramping up renewable energy production and energy efficiency actions. Minimum gas storage obligations would need to be introduced and a windfall profits tax introduced on energy producers, consistent with the REPowerEU action proposed by the European Commission. Alongside these measures, the IEA proposes a thermostat reduction of 1C in heating that would reduce energy consumption alone by 10bcm within a year. The IEA has proposed a similar 10-point plan to end dependence on Russian oil globally, and has consistently argued for the importance of energy efficiency in curbing consumption and reducing dependence on fossil fuel imports, thus enhancing energy security.

The International Renewable Energy Agency has set out the global measures, necessary to deliver on the goals of the Paris Climate Change Agreement, in particular the ambition to limit global warming to 1.5C by 2050. This would involve a drastic reduction in fossil fuel consumption (and their imports) by means of ramping up renewable energy production and energy efficiency measures.

 Ember, E3G, RAP and Bellona have produced a joint analysis, which concludes that the EU can end its dependence on Russian gas by 2025, without stalling the phase-out of coal and without having to build any new gas infrastructure. These environmental think-tanks instead suggest fully implementing the EU’s Fit for 55 plan, removing existing barriers to domestic wind and solar growth, and incentivising demand-side responses to promote energy efficiency and renewables.

**Position of the European Parliament**

In its December 2015 resolution on the EU’s Energy Union, the Parliament highlights the risks of over-dependence on Russia, an unreliable supplier which uses energy as a political weapon. It notes the importance of energy for the sovereignty of EU and Eastern Partnership countries. Third country suppliers must follow EU energy law. In energy relations with third countries, EU countries should negotiate with one voice, and consider mechanisms for collective gas purchasing. The EU needs a more coherent approach to external energy security, not least through coordination between the EU High Representative and the relevant Commissioners.

The September 2021 recommendation on EU-Russia political relations criticises the Nord Stream 2 pipeline as divisive, incompatible with the greenhouse gas emissions goals of the European Green Deal, and unnecessary given spare capacity in existing pipelines. It therefore calls for an immediate halt to the pipeline and a European strategy to end dependence on commodity imports from Russia.

The March 2022 resolution on the Russian aggression against Ukraine calls for imports of oil, gas and coal from Russia to be restricted, and for the Nord Stream 2 pipeline to be abandoned. Diversifying energy sources should be a priority, expanding LNG terminals and supply routes, unbundling gas storage, and increasing energy efficiency and the speed of the clean energy transition. Energy prices should be carefully monitored and appropriate measures taken to mitigate any negative economic and social impacts that emerge, while all cooperation with Russia in the nuclear field should cease.

The April 2022 resolution on Ukraine calls for an immediate full embargo on Russian imports of oil, coal, nuclear fuel, and gas, and for both Nord Stream 1 and 2 pipelines to be completely abandoned, accompanied by a plan to continue ensuring the EU’s security of energy supply in the short-term. The Parliament’s resolution also calls for common strategic energy reserves and energy purchasing mechanisms to be established at EU level, with the aim of increasing energy security while reducing external energy dependency and price volatility. The resolution also calls for work to be started on creating a gas union, based on common purchases of gas by Member States.
In focus: Nord Stream 2

Nord Stream 2 (NS2) illustrates the extent to which energy security has been a bone of contention between the EU and the USA, and a source of division among EU Member States. While the European Commission and the Parliament have been critical of NS2 since its conception, in 2019 Commission President Ursula von der Leyen also criticised US extra-territorial sanctions on the pipeline, due to the threat they posed to European companies carrying out legitimate business. However, the two sides are now in agreement that a Russian invasion of Ukraine requires a halt to the project. Despite initial hesitation, in February 2022 Germany put approval procedures on hold, pending further developments. In the same month, a large delivery of US LNG helped to address Europe's shortfall: according to von der Leyen, EU countries now have enough gas to last them for the rest of the winter. Even when the war in Ukraine eventually ceases, it remains dubious whether NS2 can ever receive certification to operate. This represents a considerable cost of 'stranded assets' not only for Russia’s Gazprom but also for various EU energy companies and local governments that had invested their resources in the project. This emphasises the importance of not repeating similar mistakes in future.

Figure 37: Pyramid of instruments at the disposal of the EU and its Member States

Possible action

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<th>Objective / instrument</th>
<th>Likely lead actors</th>
<th>What could be done?</th>
<th>References (sources of ideas)</th>
<th>Degree of implementation</th>
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<tr>
<td>EP requests</td>
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<tr>
<td>1</td>
<td>More coherent EU external energy policy</td>
<td>Commission, Council</td>
<td>EU to have greater responsibility for external energy policies, including negotiations with third countries and participation in internal fora</td>
<td>Resolution on Energy Union (TA 2015/0444)</td>
<td>Commission to propose an external</td>
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<tr>
<td><strong>2</strong></td>
<td>Halt NS2 and reduce imports from Russia</td>
<td>Commission, Council</td>
<td>Germany has suspended certification of Nord Stream 2 pipelines in response to war on Ukraine. Commission has proposed ways to drastically reduce energy imports from Russia, to be discussed in European Council</td>
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<tr>
<td><strong>3</strong></td>
<td>Accelerate use of renewable energy sources, improve energy efficiency, reduce GHG emissions</td>
<td>Commission, Member States</td>
<td>Parliament proposed a 60% reduction in GHG emissions by 2030 during negotiations over the European Climate Law. This implies well over 40% share of renewables in final energy consumption and energy efficiency improvements by 2030 Final text of European Climate Law only sets -55% GHG target by 2030</td>
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| **Proposals submitted by the European Commission / ongoing processes** |
|---|---|---|---|
| **4** | Countering high energy prices | Commission, Member States | Commission proposed 'toolbox' for Member States to address high energy prices (October 2021); RePowerEU joint action to address security of supply and high energy prices (March 2022); communication on security of supply and affordable energy prices (March 2022). |
| **5** | Voluntary joint purchasing of gas stocks | Commission, Member States | Commission proposed mechanism for voluntary joint purchasing of strategic gas stocks by Member States, as part of revised Security of Gas Supply (SoGS) regulation |
| **6** | Minimum levels and EU coordination of Gas storage | Commission, Member States | Commission proposed urgent amendment to SoGS regulation to ensure 80% of gas storage capacity filled by 1 November 2022; improved solidarity between Member States |
| **7** | Increase share of renewables by 2030 | Commission, Member States | Commission proposed minimum 40% share of renewables in EU final energy consumption by 2030 |
| **8** | Improve energy efficiency by 2030 | Commission, Member States | Commission proposed minimum savings of at least 36% in final energy consumption by 2030 |
| Policy suggestions from think tanks and academia / policy examples from third countries |
|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| **9** | End gas, coal, oil imports from Russia | Bruegel | Preferred scenario of ending all gas supply contracts with Russia in 2022 and signing no new ones. Better to adjust quickly now than later because of security of supply risks. Cease oil and coal imports immediately for maximum impact. |
| **10** | Increase renewables and energy efficiency to meet 1.5°C climate target | IRENA | Global renewable power capacity quadrupled by 2030 (10,700 GW). Residual use of fossil fuels with CCS and CO2 removal technologies 2.9% annual global energy intensity (efficiency) improvements. |
| **11** | Phase out gas and oil imports from Russia | IEA | Combination of measures to phase out gas imports from Russia before next winter: diversify supply, coordinate storage and moderate energy demand. Similar actions to cut Russian oil use on a global basis. |
| **12** | Improve energy efficiency to enhance energy security | IEA | Energy efficiency gains in EU have been main reason behind lower gas use and reduced need for imports. Efficiency improvements lead to improved security of supply. |
| **13** | End fossil fuel imports from Russia by 2025 | Ember, E3G, RAP, Bellona | End imports of Russian gas by 2025, without new gas infrastructure while continuing to phase out coal. Fully implement Fit for 55 package, remove barriers to solar and wind, incentivise demand response. |
Responding better to future pandemics

The issue in short: The challenge and the existing gaps

Cases and variants of concern

Cases

As of 7 March 2022, 450 million cases and 6 million deaths had been reported worldwide since the start of the pandemic. Of these, 115 million cases and 1 million deaths had been recorded in the EU. Although alarming, these numbers are still an underestimation, as vaccination and the emergence of new variants have led to an increase in asymptomatic cases and, consequently, to under-reporting and under-ascertainment. On a positive note, vaccination figures continue to grow, with 64% citizens worldwide already having received at least one vaccine dose, and 75% in the EU.

Variants

Four ‘variants of concern’ are currently circulating worldwide: Omicron, first identified in South Africa in November 2021; Delta, first identified in India in December 2020, and Beta and Gamma, first identified in September 2020 in South Africa and Brazil, respectively.

In addition, keeping the pandemic in check involves the constant monitoring of new ‘variants of interest’ that could pose a future threat to global public health. At the moment, these include Mu, first identified in Colombia, and Lambda, from Peru. Both currently only show sporadic transmission in the EU and have an unknown impact on Covid-19 disease severity.

Omicron, currently the dominant variant in the EU, has emerged too recently for its epidemiology and pathogenicity to be fully understood. It seems to carry a five-fold higher risk of reinfection compared with the previous dominant variant, Delta. It is also more transmissible than Delta. This could be due to mutations in the spike protein that allow it to escape the host immunity more easily, as well as its increased ability to colonise the upper respiratory tract. In contrast, Omicron seems to show reduced disease severity compared with Delta, partly on account of slower growth in lung tissue. Four Omicron sub-lineages are currently in circulation. BA.1 is the current prevalent sub-lineage and BA.2 is steadily emerging worldwide, with the possibility of overcoming BA.1 in the coming months and delaying a current downward curve heading out to the summer. Several differences in the spike protein composition separate BA.1 from BA.2, with BA.2 reproducing twice as fast as BA.1 and seemingly more transmissible.

'Long Covid'

Although the figures for infection cases, hospital occupancy and deaths are continuing to fall modestly in the EU, with Omicron seeming to cause less severe symptoms overall compared with previous variants, one aspect of the disease that is still not totally clear is the persistence of Covid-19-associated symptoms over more than three months (commonly defined as 'Long Covid'). Reports differ depending on the methods used, but more than half of infected people have reported experiencing at least one chronic complication following Covid-19 infection, including type 1 diabetes, myocarditis and reduced respiratory capacity. In addition, many patients report extreme fatigue, memory issues, ‘brain fog’, tinnitus and depression. Research will continue to ascertain the biological causes and the full extent of the Covid-19 health impact, years into the pandemic. What
is certain is that Covid-19 has the capacity to affect virtually all the organs of the body, to varying degrees of severity, and that these symptoms are a result of the viral capacity to infect the central nervous system, heart and lungs. Possible risk factors include type 2 diabetes, circulating SARS-CoV-2 mRNA fragments, Epstein-Barr virus viremia and specific autoantibodies. The differences between variants are not clear. However, vaccination has been shown to protect against 'Long Covid'.

Medium-term scenarios

It is difficult to predict when the Covid-19 pandemic will evolve into an endemic state. The main factors involved are the parallel ‘race’ between increased immunity due to both natural recovery from infection and vaccination campaigns, and the emergence of new variants potentially able to escape acquired immunity. The World Health Organization (WHO) optimistically predicts an end to the acute phase of infection this year, if vaccination campaigns continue and the global vaccination rate reaches at least 70% in the coming months.

Varied levels of vaccine distribution worldwide could hamper these plans, as higher topical virus circulation will serve as a hotbed for the emergence of new variants with the potential to escape immunity. In this regard, it could be argued that vaccine equity is an urgent goal that transcends local population needs and serves a common global interest of leading the way out of the pandemic.

Once it reaches an endemic state, Covid-19 could see an annual seasonal curve similar to that of influenza, with an autumn-winter peak in the EU. This tendency to seasonality has already started to emerge and is influenced by lower temperatures and intermediate relative humidity, which allow the virus to survive and remain in suspension in smaller water particles for longer periods of time, especially in closed environments with little aeration. Disease severity will depend on individual risk, affecting mostly the elderly, the immunocompromised and the unvaccinated. Of note, circulation in animal reservoirs, including domestic cats and dogs, could lead to the repeated emergence of new, immuno-resistant variants.

Preparedness and management

Crisis preparedness and management will depend on three main factors: the detection and surveillance of new variants; vaccination and therapeutic options; and voluntary protective behaviours (mask wearing, social distancing and isolation when showing symptoms or infection detected).

Surveillance

A possible solution for the under-reporting that arises with the asymptomatic cases that are more prevalent with Omicron is the surveillance of waste water. This strategy of random sampling allows continuous monitoring of viral circulation levels and the detection of new variants, while removing the logistical and socioeconomic burden of long-term active PCR (polymerase chain reaction) monitoring. It could be used in conjunction with more active monitoring in cases of sporadic local outbreaks, which will be a likely future scenario for Covid-19. In addition, it would concomitantly allow other common human pathogens to be monitored.

Vaccines and immunity

Vaccination has been shown to be successful in reducing the risk of severe and lethal Covid-19 (60-70% probability of protection from Omicron, with no decline). It also helps alleviate less severe symptoms, but with less probability and stability over time: protection from Omicron drops from 60% to 10% after five months, for both second and third doses; it is lower compared with other variants and wanes faster.

A fourth vaccine dose has been found to be useful in managing the disease, as it doubles protection against infection and quadruples protection against severe infection. However, even with variant-targeted vaccines, full protection has never been verified. Therefore, other protection measures,
such as mask wearing, ventilation, and distancing, continue to be fundamental to preventing transmission and consequently dampening disease severity.

**Therapeutics**

A few treatment options for potential over-the-counter use are currently under review by the European Medicines Agency (EMA). Paxlovid, an antiviral pill developed by Pfizer, has received conditional marketing authorisation from EMA and is already being rolled out in the UK. It has shown 90% efficacy in preventing hospitalisation and death. Lagevrio, a second antiviral option developed by Merck, is currently under marketing evaluation by EMA. Unfortunately, it shows only 30% efficacy in preventing infection and could have associated mutagenic risks.

For severe and critically-ill patients requiring hospitalisation, several types of medicinal products are already available and at use in hospitals. These are classified as systemic corticosteroids, immunomodulatory agents, monoclonal antibodies against SARS-CoV-2 and antivirals. Antibiotics will continue being prescribed for patients with suspected bacterial co-infections or secondary infections, which are quite rare.

Convalescent plasma, that is, the administration of plasma with antibodies from patients who have recovered from Covid-19, has not been recommended by the WHO, as its benefits are unproven.

**Existing policy responses**

**European health union package**

The European health union initiative draws on the lessons learned from the pandemic. It aims to strengthen the EU’s health security framework, while also reinforcing the crisis preparedness and response role of key EU agencies. It is composed of a set of legislative and non-legislative acts that are all directly relevant to the tasks and governance of the Health Emergency Preparedness and Response Authority (HERA).

HERA has been set up to strengthen the EU’s ability to prevent, detect, and rapidly respond to cross-border health emergencies, by ensuring the development, manufacturing, procurement, and equitable distribution of key medical countermeasures (i.e. vaccines and therapeutics). An early milestone of this cooperation is VACCELERATE, the first EU-wide network for Covid-19 vaccine trials, launched as part of the HERA incubator. Preparedness efforts also include forming resilient industrial capacities to ensure timely and commensurate supply of counter-measures. HERA will establish EU FAB, a network of ‘ever-ready’ multi-technology production capacities for vaccine and therapeutics manufacturing in the EU. The objective is to unlock a production capacity of 700 million doses of vaccine, of which 50% within six months following the breakout of a crisis situation.

HERA activities will cover preparedness and crisis phases. This will lead to governance based on two main operation modes (preparedness and crisis). This calls for smooth interplay with other EU institutions and agencies (such as the EMA or the ECDC), Member States and stakeholders. Through their recovery and resilience plans, Member States are expected to contribute further to resilience and preparedness.

Future cross border health threats could also be of a non-infectious nature. HERA will conduct a technology review and gap analysis on antimicrobial resistance (AMR) medical countermeasures (expected towards the end of 2022). These new capabilities complement the Commission’s EU ‘one health’ action plan against AMR, which aims to promote best practices for antimicrobials and boost research and innovation. The European Food Safety Authority (EFSA) also plays a key role in fighting AMR by monitoring resistance in food and animals. For this it uses data from Member States, and provides independent scientific advice on risk assessments in collaboration with the ECDC and EMA. HERA also plans to monitor human-made threats such as a bio-terrorism, including chemical, biological, radiological and nuclear (CBRN) threats.
Tackling the infodemic

The Covid-19 pandemic broke out at a time when the profile and impact of misinformation and disinformation are facilitated by various trends, including digitalisation. The EU had already adopted initiatives to tackle the phenomenon. For instance, in 2016, the Commission and the High Representative/Vice-President of the Commission (HR/VP) set out a joint framework on countering hybrid threats. The Covid-19 pandemic magnified the global reach and risks of this trend, to the extent that the WHO adopted the concept of ‘infodemic’ (i.e. too much information including false or misleading information in digital and physical environments during a disease outbreak). In 2021, the Commission included ‘improving the coordination and sophistication against disinformation’ as one of the top 10 lessons drawn from the pandemic.

**Figure 38: Responding better to future pandemics**

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Obstacles to implementation

Beyond pandemics

It is important to bear in mind the threat of risk aggregation, between risks to health and other risks identified in this report. For example, semiconductor supply chain interruption (and in an extreme situation, collapse of the internet) could have a major impact on health systems, and vice versa, as seen during the Covid-19 pandemic. In this regard, the EU Chips Act will pool resources and provide a new framework to ensure security of supply, and HERA plans ensure the availability of critical technologies and production sites for medical countermeasures. Furthermore, the risk of extreme weather events brought about by climate change, like the floods seen across the Benelux region and Germany in 2021, could cause widespread fatalities.

This further highlights the need for a single EU approach to health, as the health of the human population and of the planet go hand in hand. Similarly, international conflicts may hamper the effectiveness of the international dimension of the EU’s vaccine strategy. Acting together as ‘Team Europe’, the EU, its Member States, and financial institutions, in particular the European Investment Bank and the European Bank for Reconstruction and Development, is expected to invest over €3 billion to help secure 1.8 billion doses of vaccines for 92 low and middle-income countries in 2021 and 2022.

Policy proposals by experts and stakeholders

HERA has been commented on by several stakeholders’ organisations. The European Public Health Alliance (EPHA) has stressed the global relevance of HERA’s activities. According to EPHA, HERA’s results should, where relevant, reflect the public good dimension, as well as ensuring affordability, accessibility and availability. A network of 19 pan-European organisations representing patients,
consumers, health professionals, and civil society, coordinated by the European Alliance for Responsible R&D and Affordable Medicines, have voiced their preference for an inclusive and transparent governance scheme, to allow all interested actors to take part, including patients.

Under the Conference on the Future of Europe, European Citizens’ Panel 3: ‘Climate change and the environment / Health’ adopted several recommendations relevant to HERA, including for instance recommendation 43, which will be taken forward to the Conference Plenary: ‘We recommend that the European Union increases its budget dedicated for joint research and innovation projects in the area of health (without budget cuts in other EU health-related programmes). This would also strengthen European scientific and research institutions overall’.

Position of the European Parliament

Health Emergency Preparedness and Response Authority (HERA)

While supporting the aims of HERA in general terms, Parliament – in its October 2021 resolution on EU transparency in the development, purchase and distribution of Covid-19 vaccines – criticised the Commission’s decision to refrain from using the ordinary legislative procedure through Article 168 TFEU in setting up HERA, thus failing to establish HERA as a fully-fledged independent agency subject to the same scrutiny requirements as other agencies, such as the EMA and the ECDC. The Parliament regretted ‘the fact that the Commission’s approach, which has led to Parliament being excluded from designing and overseeing the work of HERA, can be regarded as yet another shortcoming that has undermined transparency and accountability for public spending and decision-making in the area of public health’.

Parliament further stressed the importance of accountability, including parliamentary monitoring of HERA, in its November 2021 resolution on a pharmaceutical strategy for Europe. None of the European health union proposals and initiatives has been subject to a formal impact assessment. In this context, the Parliament's monitoring competence, such as budgetary control, will be key to assessing the effectiveness and efficiency of the European health union’s implementation, including HERA’s activities. However, the evaluation framework developed under the health union differs significantly from that established under the US Pandemic and All Hazards Preparedness Act. While the US legislator ensures congressional oversight of the evaluation by including several provisions that require the assistant secretary for preparedness and response also to report annually to the ‘relevant committees of Congress’, the European Parliament committees are not mentioned in connection with a review of HERA. Article 8 of the Commission decision establishing HERA mentions only an obligation for the Commission to report to the European Parliament, to the Council and to the HERA Board on a review of implementation of HERA’s operations by 2025.

In terms of HERA’s mandate, Parliament has adopted various resolutions that either make direct reference to, or offer relevant guidance on, HERA. In its July 2021 resolution on trade-related aspects and implications of Covid-19, the Parliament emphasised the key role played by public sector resources, allowing pharmaceutical companies to de-risk the whole vaccine value chain; it also considered that a multilateral intellectual property rights (IPR) framework could offer the protection and incentives that are critical for preparedness against future pandemics. In its May 2021 resolution on accelerating progress and tackling inequalities towards ending AIDS as a public health threat by 2030, Parliament encouraged the Commission and the Member States to explore the decoupling of research and development spending from the price of medicines, for instance through the use of patent pools, open source research, and grants and subsidies. In its above-mentioned November 2021 resolution on a pharmaceutical strategy, Parliament considered that HERA should initiate and support the development of innovation, establish an EU-level list of medicinal products of major therapeutic interest, facilitate their production within the EU, promote their joint purchase, and build up strategic stocks of these medicines.
In November 2021, the Parliament reflected further on HERA when adopting its first reading position on the proposal for a regulation on serious cross-border threats to health. In particular, the Parliament adopted several amendments aimed at ensuring HERA’s visibility in different key processes and schemes established, and at facilitating the coordination with the set of bodies to be established under the proposal for a regulation on the emergency framework of measures for ensuring the supply of crisis-relevant medical countermeasures.

Infodemic

The European Parliament has been tackling the infodemic situation since the early phase of the Covid-19 pandemic. With the resolution of 17 April 2020, it stressed that disinformation surrounding Covid-19 is a major public health problem and that everyone should have access to accurate and verified information.

In its resolution of 24 November 2021 on a pharmaceutical strategy for Europe, the Parliament stressed the importance of strategic public information, to facilitate the dissemination of knowledge and solutions, beyond the health dimension of the ‘infodemic’.

Furthermore, with its resolution of 11 November 2021 on ‘Strengthening democracy, media freedom and pluralism’, it highlighted that independent and high quality journalism and civil society organisations play a crucial role as guardians of democracy and the rule of law by holding power to account and fighting disinformation and misinformation.

Health beyond the Covid-19 pandemic

The rising incidence of non-communicable diseases (NCDs) places a major burden on European healthcare systems, costing €700 billion in treatment each year. The development of the EU’s capabilities for health monitoring, research, and data analysis through the European health union could contribute to better understanding and coordination to combat NCDs. For example, cancer is the second leading cause of mortality in the EU (after cardiovascular diseases), with 2.6 million diagnoses and 1.2 million deaths every year. To address this, one main pillar of the European health union is Europe’s beating cancer plan, which will have a budget of €4 billion to improve early detection, ensure equal access to diagnosis and treatment, and improve quality of life of patients and survivors. MEPs on the Special Committee on Beating Cancer (BECA) considered this plan ‘a first step towards a real European Health Union’. At its final meeting, BECA Members voted overwhelmingly in favour of the rapporteur’s report, which contains over 1 500 amendments to the plan, arranged across 10 proposals.

Other NCDs, such as obesity, cardiovascular diseases, and mental health disorders, do not currently have dedicated EU action plans. Nevertheless, other proposed initiatives under the European health union, such as the pharmaceutical strategy and the European Health Data Space, will help to fight these by ensuring, respectively, access to affordable medicines, and better cross-border access and interoperability of health data that could underpin medical research and innovation.

In focus

Managing the risks of the Covid-19 pandemic remains a challenge, not least because of the emergence of new variants, and unequal worldwide vaccination distribution.

While EU vaccination rates have reached three quarters of the population, new SARS-CoV-2 variants keep emerging in the EU. Although these variants appear to be generally less severe, they still pose challenges to health systems: the risk of reinfection is enhanced and transmissibility appears to be higher than with previously dominant variants. At the same time, new variants are likely to continue to emerge until strategies for worldwide vaccination are effective.
Furthermore, the frequency and effects of 'Long Covid' (defined as the persistence of SARS-CoV-2-associated symptoms for more than three months) are still under evaluation, requiring further investigation.

Although several drugs to treat SARS-CoV-2 infection have been approved and show effectiveness, vaccination remains the most effective tool against the emergence of new variants and to limit the effects of long Covid. The implementation of a globally effective vaccine strategy therefore remains key to enhancing Europe's resilience.

If measures are successful, it is expected that Covid-19 – while still present – will enter a stage of seasonality, characterised by higher case numbers in the winter months, similar to the flu.

To achieve this and manage the pandemic, rethinking present surveillance and monitoring schemes, ensuring the distribution of vaccines worldwide and implementing an action plan against disinformation and misinformation could be important milestones.

**Figure 39: Pyramid of instruments at the disposal of the EU and its Member States**
## Possible action

| EP requests | | | | | |
|---|---|---|---|---|
| **Objective / instrument** | **Likely lead actors** | **What could be done?** | **References (sources of ideas)** | **Degree of implementation** |
| October 2021 resolution on EU transparency in vaccine development, purchase and distribution | HERA | Establish HERA as a fully independent agency, thus subject to transparency and accountability rules under Article 168 TFEU | | |
| November 2021 resolution on a pharmaceutical strategy for Europe | | Accountability of HERA and EU health union proposals and initiatives; HERA’s role in EU medicine production | | |
| May 2021 resolution on AIDS | European Commission, Member States | The role of open research and grants to ensure affordable medicines | | |
| July 2021 resolution on trade-related aspects of Covid-19 | HERA | The role of the public sector in ensuring the vaccine value chain; Creation of a multilateral intellectual property rights framework to offer protection and incentives to preparedness against future pandemics | | |
| November 2021 Parliament proposal | HERA | Proposal for a regulation on serious cross-border health threats, including extending HERA’s role | | |
| Parliament resolution November 2021 on a pharmaceutical strategy for Europe | | Importance of access to accurate and verified information and to independent, high quality journalism in order to tackle dis- and misinformation | | |

## Proposals submitted by the European Commission / ongoing processes

| | | | |
|---|---|---|
| **Establishment of HERA** | European Commission | Procurement and distribution of vaccines and therapeutics | |
| VACCELERATE | HERA | Covid-19 vaccine trials | |
| EU FAB | HERA | R&D of vaccines and therapeutics | |
| EU’s ‘one health’ action plan against AMR | European Commission | Raise awareness of AMR and boost innovation on new therapeutics | |
### Policy suggestions from think tanks and academia / policy examples from third countries

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<td><strong>11</strong></td>
<td>Joint antimicrobial resistance monitoring</td>
<td>EFSA-ECDC</td>
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<td><strong>12</strong></td>
<td>A pharmaceutical strategy for Europe</td>
<td>European Commission</td>
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<td><strong>13</strong></td>
<td>European health union</td>
<td>European Commission</td>
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<td><strong>14</strong></td>
<td>Team Europe</td>
<td>EU, EIB, EBRD</td>
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<td><strong>15</strong></td>
<td>Framework on countering hybrid threats</td>
<td>European Commission and HR/VP</td>
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<tr>
<td><strong>16</strong></td>
<td>EU chips act</td>
<td>EU</td>
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1. A proposal for a regulation on serious cross-border threats to health, repealing Decision No 1082/2013/EU; a proposal for a regulation on a reinforced role for the European Medicines Agency (EMA) in crisis preparedness and management for medicinal products and medical; a proposal for a regulation amending Regulation (EC) No 851/2004 establishing a European Centre for Disease Prevention and Control (ECDC); a proposal for a regulation on the emergency framework of measures for ensuring the supply of crisis-relevant medical countermeasures in the event of a public health emergency at Union level; and a Commission decision of 16 September 2021 establishing HERA.

2. Global Health Advocates; European Public Health Alliance; Treatment Action Group; Asociación por un Acceso Justo al Medicamento; Health Action International (HAI); Access to Medicines Ireland; SOMO-Centre for Research on Multinational Corporations; Prescrire; Wemos Foundation; Consilium Scientific; Salud por Derecho; Consumer Association the Quality of Life-EKPIZO; Plataforma NoGracias; Universities Allied for Essential Medicines (UAEM Europe); AIDES; Médecins du Monde International Network (MdM International); Pharmaceutical Accountability Foundation; France Assos Santé; Ligue contre le cancer.

3. See ‘60. Reiterates its position that the Commission should consider the creation of a European version of the US Biomedical Advanced Research and Development Authority; welcomes the fact that the Commission has made a proposal for a European HERA but expresses its disappointment that Parliament has not been involved in its proper role as co-legislator;¹.

4. See, for instance, new articles 6.1, 10.1 and 11.1.

5. See, for instance, new articles 4.7 and 24.2.
Promoting economic recovery and resilience

The issue in short: The challenge and the existing gaps

Following a deep recession in 2020 of -5.9% and further contraction in the first half of 2021, the EU economy recovered faster than expected, with growth of 5% in 2021. However, expectations are that Europe is at an early stage of an adverse economic shock to its economy – just when the recovery from the pandemic had become more firmly entrenched – as the economic implications of Russia’s invasion of Ukraine are likely to be significant. As a consequence, the post-Covid recovery will almost certainly be significantly delayed, with a clear downside risk. While the overall economic costs are still difficult to predict, they will differ between EU Member States, whose economic vulnerability to the invasion is very unevenly distributed.

At the time of writing, growth rates vary across EU countries, as the impact of the pandemic on economic activity continues to weaken over time and supply-side constraints ease. So far, the strong economic recovery has been aided by a rapid and substantial fiscal and monetary response. That response was possible through the activation of the general escape clause in March 2020 by the European Commission and the Council, allowing Member States to undertake appropriate budgetary measures in exceptional circumstances. The clause was extended by the Commission in March 2021, and is likely to be extended to 2023 in light of the conflict in Ukraine.

The severe economic impact from the pandemic led to a substantial shift in EU fiscal policy guidance. An unprecedented budgetary package was adopted, which combined the €1 210.9 billion multiannual financial framework (MFF) for 2021 to 2027 with the €806.9 billion Next Generation EU (NGEU) instrument. This package was made possible thanks to an agreement on an unprecedented scale on borrowing at EU level to fund it. The debt will be repaid through the EU’s own resources (OR), which necessitates an expansion of the OR portfolio. Even before the NGEU-related borrowing, there had been an ongoing debate on the reform of the EU system of own resources, a key goal being to limit the share of GNI based on own resources and to align the OR system better with EU policies. Making the NGEU a permanent instrument had been mentioned as a possible option even before the outbreak of the war in Ukraine; the debate on new joint borrowing to fund common strategic goods, such as energy security or defence, is now likely to intensify.

Existing policy responses

The European economy is undergoing unprecedented transformation towards a more sustainable, green economy, while at the same time driving the digital transition. Both require ambitious investments and reforms. The recovery from the Covid-19 pandemic has been supported by new EU instruments, including the European instrument for temporary Support to mitigate Unemployment Risks in an Emergency (SURE), the Coronavirus Recovery Investment Initiative (CRII), and NGEU. According to the 2021 stability programmes, a majority of Member States are planning to enhance the resources available for government investment as the share of public investment in GDP is set to surpass pre-pandemic levels in 2022.

The European Semester, with its broader scope and multilateral surveillance, will be at the heart of the EU’s fiscal, economic and employment policy coordination. In light of the policy changes after the Covid-19 crisis, the European Semester is being adapted to take into account new instruments and facilities to drive forward the Member States’ reform and investment agendas.
In July 2020, to help repair the immediate economic and social damage caused by the pandemic, and at the same time to bring lasting change and make Europe more resilient and sustainable, the Member States created NGEU as a temporary recovery instrument (€806.9 billion in current prices, to be paid out by the end of 2026). Together with the 2021-2027 MFF, it represents 1.8 % of EU GNI, the largest investment package ever implemented through the EU budget, and provides a much-needed catalyst for public investment. Furthermore, with the new, unfolding crisis caused by the war in Ukraine, the role of NGEU has been de facto extended, but within its agreed maximum financial capacity. The Member States were encouraged to use it as the ‘first line’ reaction, and to cover, in particular, the growing need for investment in energy security (see below).

The main advantage and innovation of NGEU is the way it is financed, and its focus on the climate and digital transformation. To finance the instrument, the Member States broke with a taboo that the EU cannot borrow on a larger scale to finance its expenditure, and agreed to base it on collective borrowing on the international capital markets. As a result, in the past 12 months the Commission has moved from being a small issuer, raising funds to finance relatively small lending programmes like the European Financial Stabilisation Mechanism (EFSM) and macro-financial assistance (MFA), to being one of the biggest issuers in euro.

The first assessments of the implementation of the Commission’s borrowing strategy were positive and recommended making it a permanent solution, mentioning among its benefits the enhancement of the international role of the euro. The optimistic views of the NGEU are amplified by estimates of its substantial macroeconomic impact. By 2024, it is expected to trigger at least a 1.5 % increase in the EU’s real GDP compared to a baseline scenario without NGEU investments, and to increase employment by up to 1 % during its period of operation.

The centrepiece of NGEU is the Recovery and Resilience Facility (RRF) (some 10 % of NGEU’s resources are channelled through six other budgetary programmes: React-EU, Just Transition Fund, InvestEU, Rural development, Horizon Europe, and RescEU). Worth €723.8 billion, the RRF is a mix of grants and loans, to be invested in line with six pillars representing policy areas of European relevance, in a package of reforms and investments based on national plans. These plans have to take into account the 2019 and 2020 country-specific recommendations of the European Semester. Thanks to the introduction of compulsory targets for spending on green transition and digital transformation under each national plan (at least 37 % and 20 % respectively) much of the RRF financing supports projects in the areas of decarbonisation, renewables, energy efficiency, resilience of key infrastructure, and sustainable transport.

At the beginning of March 2022 – i.e. less than a year since the first national recovery and resilience plans (NRRPs) were submitted for assessment – the Commission reported that RRF implementation was firmly underway. With 22 national plans approved, and with payments at the level of 18.6 % and 13 % of the approved grants and loans respectively, the Facility seemed to be operating according to the timeline agreed with the Member States.

The 2021-2027 MFF was adopted in a package that included NGEU and linked to the Own Resources Decision, whose application would secure sufficient revenues to continue existing EU programmes without limiting their funding under the next MFF and to repay the NGEU-related debt. The Own Resources Decision was ratified by all 27 Member States by 31 May 2021 and entered into force in June 2021. The Interinstitutional Agreement (IIA) that introduced the principles and criteria for new own resources confirmed the link to NGEU repayments and established an own resources roadmap with regular dialogue.
Figure 40: Ensuring economic recovery and resilience

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>November 2020</td>
<td>Political agreement on the MFF and roadmaps for new OR</td>
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<tr>
<td>July 2020</td>
<td>Political agreement on the revision of the NGEU</td>
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<tr>
<td>April 2020</td>
<td>Launch of temporary SEU instruments: CB and CFI</td>
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<tr>
<td>March 2021</td>
<td>Activation of general escape clause until end 2022</td>
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<tr>
<td>May 2018</td>
<td>Commission proposal for new OR (with MFF 2021-2027 proposal)</td>
</tr>
<tr>
<td>January 2021</td>
<td>UR contribution based on non-recycled plastic packaging waste</td>
</tr>
<tr>
<td>May 2021</td>
<td>Commission decision on a potential extension of general escape clause until 2023</td>
</tr>
<tr>
<td>February 2021</td>
<td>Adoption of Regulation on the RBF</td>
</tr>
<tr>
<td>July-August 2021</td>
<td>The Council approves first national plans and performance of first cycle in new OR</td>
</tr>
<tr>
<td>December 2021</td>
<td>Proposal for introduction of next generation of OR</td>
</tr>
<tr>
<td>October 2021</td>
<td>Commission re-launches review of EU economic governance</td>
</tr>
<tr>
<td>December 2022</td>
<td>Council deliberation on new OR by 1 July 2022</td>
</tr>
<tr>
<td>July 2023</td>
<td>Approval of new OR by the European Council</td>
</tr>
<tr>
<td>January 2023</td>
<td>Introduction of next generation of OR</td>
</tr>
<tr>
<td>August 2023</td>
<td>Directive for Member States to apply for RBF to new OR</td>
</tr>
<tr>
<td>Autumn 2023</td>
<td>Commission proposal for a second basket of new OR by end of 2023</td>
</tr>
<tr>
<td>December 2026</td>
<td>Deadline for the NGEU payments</td>
</tr>
<tr>
<td>2028</td>
<td>Indicative start of repayment of the NGEU</td>
</tr>
<tr>
<td>2050</td>
<td>End of repayment of NGEU</td>
</tr>
</tbody>
</table>

Source: EPRS.

With a delay to the roadmap established in the IIA, on 22 December 2021 the Commission proposed the next generation of own resources to establish some new resources, namely the revenues from emissions trading (ETS), resources generated by the carbon border adjustment mechanism (CBAM), and based on the recent OECD/G20 agreement on a re-allocation of taxing rights over multinational corporations (‘Pillar One’). If the proposal is adopted, the revenues included in it are projected to start flowing into the EU budget from 1 January 2023 and to generate up to €17 billion on average annually after the initial introductory period.

A proposal for a second basket of new own resources is currently planned by the Commission for the end of 2023. Other new own resources options are also included in the IIA. If these proposals are not adopted and implemented, or if they do not deliver the expected and needed revenues, some policy options are either to increase the GNI-based own resource, or to limit the funds of the next MFF compared to existing EU programmes. Furthermore, as the Russian war in Ukraine evolves, the option of further borrowing is also being discussed, including by the current French presidency.

Obstacles to implementation

In the context of heightened economic and geopolitical uncertainty, the relaunch of the review of the EU’s economic governance framework has put the spotlight on the underlying question of how the economic governance framework can ensure enough investment to support the twin transition while preserving public debt sustainability. For instance, to reach the targets set in the Green Deal and the digital transformation, the EU will need to increase annual public and private investment by around €650 billion in the coming decade (2021-2030), compared to the previous decade. As previously highlighted, the geopolitical ramifications of this investment gap, for instance through reducing the transition time towards renewable energy sources to reduce dependency on fossil fuel-based energy sources, are in a dynamic stage and will need to be reassessed.
While the economic consequences of the conflict in Ukraine are still unclear, the current fiscal framework compels Member States to adopt pro-cyclical fiscal policies. The underlying fiscal rules remain complex, rely on unobservable variables, lack transparency and have failed to sufficiently preserve the level of public investment during periods of fiscal consolidation. Furthermore, since the containment of the pandemic led to a heavy deterioration of public finances, the current framework does not sufficiently differentiate between Member States with markedly different fiscal positions, sustainability risks and other vulnerabilities.

The review of economic governance, launched in February 2020 and updated in October 2021, further raises the question of how the design, governance and operation of the NGEU/RRF provide useful insights in terms of economic governance through improved ownership, mutual trust, enforcement and interplay between the economic and fiscal dimensions. This is particularly pertinent, since potential obstacles to implementing NGEU can concern both financing and spending.

On the financing side, the provision of support under NGEU would not be possible without successful borrowing operations conducted by the European Commission on behalf of the EU. This is a relatively new and challenging role, particularly given the unprecedented scale of the issuing operations and the record time in which the infrastructure for it had to be set up. Therefore, any disruptions or delays to implementing the EU borrowing strategy could have an impact on achieving NGEU’s objectives. Although the borrowing has been successful so far, the situation could change if the war in Ukraine escalates, market conditions deteriorate, or if doubts arise regarding how NGEU funds are used and governed.

Another financing aspect, the repayment of NGEU-related debt, has been projected in the context of an upcoming reform of the OR system. Over the years, such reforms have proven to be a difficult process, which indicates there is a risk of a delay or blockage of the reform of the OR system this time as well. Apart from the complexity of the adoption process, the need for a unanimous decision by all Member States when negotiations happen in the spirit of juste retour, rather than that of common interest and European added value, makes the process inherently difficult and even more so when discussing projections of the impact of novel policies. A potential delay or blockage of the introduction of new own resources could threaten the EU’s investment and policy implementation capacity, especially at a time of additional demand for policy responses created by Russia’s war on Ukraine. It could also intensify political debates on the EU budget, as it could lead to an increase in the share of GNI-based contributions. A potential delay or blockage would be even more problematic in the event of increased interest rates on NGEU debt, considering its magnitude, or other unforeseen external shocks.

On the spending side, the risk is mainly related to the possibility of misusing or wasting resources under the NGEU. Concerns relate to the limited budgetary scrutiny over the borrowed funds, and to the transparency of the performance-based implementation and disbursement method of the RRF, which differs to the approach used for EU budgetary instruments so far. Analysts raise the issue that speedy implementation of such large amounts should not take place at the cost of quality of reforms and investments, and proper control of spending, also in the context of rule of law conditionality. They highlight a risk of fraud and corruption. These concerns are all the greater with the off-budget character of NGEU resources and, consequently, limited transparency and democratic scrutiny of spending. Treated as external assigned revenue, NGEU resources are not part of the usual budgetary procedures and are not subject to the same control as the MFF programmes. Moreover, the involvement of the European Parliament as the budgetary authority is restricted.

Policy proposals by experts and stakeholders

The required total investment levels will remain high (see ‘In focus’) to pave the way towards a green, digital and resilient economy (€650 billion a year until 2030 according to the European Commission). Hence, an effective policy framework that incentivises and enables investment is crucial to sustain
the level of investment needed for the green and digital transition. The ongoing review of the European economic governance framework provides an opportunity to reform the EU's fiscal rules to ensure that they enable Member States' investment and reform policies, while safeguarding sound public finances.

Various reform proposals have been outlined, from simply increasing the debt ceiling to 100 %, to a country-specific debt anchor or a simplified two-tier framework that consists of an expenditure rule linked to a debt anchor, to abandoning fiscal rules entirely and instead suggesting a set of fiscal standards. Other proposals argue for a fiscal policy anchor related to government interest payments or emphasise the need for a 'green golden rule' tailored towards necessary (green) public investment.

The successful launch of NGEU and the RRF is seen as a turning point for the EU. It has demonstrated that joint borrowing as a way of financing the EU's common needs is politically and legally possible, and has added a new dimension to the debate on a fiscal capacity for the euro area, reforming the European Semester, and financing the EU's common needs, for instance related to the green and digital transformations. Some analysts consider transforming NGEU into a permanent facility to be a key priority for reinforcing the EU's economic policy framework. They see it as a way to solve many challenges that the EU is facing. Some experts offer scenarios on developing NGEU into a permanent instrument.

It is emphasised by some experts that a positive evaluation of the implementation of NGEU and the RRF, in particular, will be crucial for a decision on using it as a template for any future instruments. Among the aspects that need improving, analysts mention anti-fraud measures, transparency, control mechanisms, broadening the accountability of RRF management and better involvement of national parliaments, the European Parliament and social and regional partners.

The idea of extending NGEU to cover new objectives or even to resort to new joint borrowing gained even more momentum after Russia's invasion of Ukraine put the EU on the path to a new crisis. Although controversial, and probably insufficient to cater for the needs, the issuance of new joint debt remains one of the options under consideration. In the meantime, NGEU's unused loans (so far, only seven Member States have asked for them and some €200 billion is still available) can offer some immediate flexibility and support for action on energy security, defence, humanitarian aid or migration.

**Position of the European Parliament**

Whereas a substantial share of the investment will be borne by the private sector, public investment will have to increase as well. To mobilise private investment more efficiently, a functioning Banking Union and progress on the Capital Markets Union are crucial, including action on sustainable finance. On the fiscal side, the Parliament stressed in its own-initiative report on the Annual Sustainable Growth Strategy 2021 that 'the focus should be on forward-looking policies and investments, especially in those Member States that have fiscal room for manoeuvre to invest' and 'that the RRF creates a unique opportunity for delivering the reforms and investments needed for the EU to get ready to cope with the present challenges'.

The European Parliament's role in the overall management and scrutiny of NGEU is bigger than with other intergovernmental tools created in response to various crises over the last decade, such as the European Stability Mechanism. Still, it is rather limited due to the legal basis chosen for the creation of the recovery instrument (Article 122 of the Treaty of the Functioning of the EU), the treatment of the resources borrowed as external assigned revenue (see above), and in comparison with the role it has as the EU's budgetary and discharge authority. As a result, although the Parliament is a co-legislator for the biggest part of NGEU, the RRF, the scrutiny and discharge functions over spending are compromised. The Parliament sees it as a risk to central budgetary principles and calls for more transparency in the implementation process, and for relevant changes to the financial rules.
applicable to the general budget, in particular making external assigned revenue an integral part of the budget.

Other key aspects discussed and monitored by Members of the European Parliament concern the quality of the reforms and investments included in the NRRPs, risks and delays in the implementation process, assessment of the payment requests and verification of the milestones and targets that are the condition for payments. Also under discussion are equal treatment of the Member States, application of rule of law conditionality, and involvement of national parliaments and regional and local authorities in implementing the RRF.

In the draft report on the borrowing to finance NGEU, the Parliament underlines that further investment in EU policies will be necessary to strengthen EU competitiveness and strategic autonomy, in particular regarding industry and climate action, and considers that NGEU is a good example of a viable architecture for funding above the MFF ceilings. Moreover, notwithstanding its reservations on the functioning and scrutiny of NGEU, as mentioned above, the Parliament calls on all EU institutions to ensure that this instrument is given a longer-term political vision.

The European Parliament has demonstrated long-term commitment to the reform of the own resources system. It has acknowledged the necessity to conduct such reform and has called consistently for the introduction of a basket of new own resources, which will diversify revenues, unload the pressure on the GNI-based resource and guarantee the EU’s capability to repay NGEU-related debt without risking limitation of existing EU policies. In its resolution on the reflection paper on the future of EU finances, the European Parliament stressed that additional political priorities should be coupled with additional financial means and not be financed to the detriment of existing EU policies. There is an ongoing debate in the Parliament over whether the revenues collected under the newly proposed types of own resources should be assigned to particular policies, or whether the fundamental principle of universality of the budget should be observed.

### In focus: the European growth model

The European economy is undergoing unprecedented transformation in the context of major uncertainties linked to the global and security outlook. As outlined in European Commission’s Communication on the European Growth Model, the transformation relies on two equally important pillars: investments and reforms. On the one hand, investments are pivotal for sustained and sustainable growth. On the other hand, our economic structures and the regulatory framework, such as the fiscal framework, should support the economic transformation and be conducive to investment. Coherence between fiscal surveillance and economic policy coordination will be an integral part in this endeavour in order to align investment and reform policies in the Member States as well as national and EU instruments and objectives.

In an environment of geopolitical instability and rising global challenges, doubling down on the green and digital transition has become even more urgent to ensure the phasing out of EU dependency on Russian gas, oil and coal imports. The informal European Council in March 2022 in Versailles proposed a pathway to a new growth and investment model to make Europe independent from Russian fossil fuels well before 2030. The European Commission is invited to propose, by the end of May 2022, a REPowerEU plan that should reduce fossil fuel imports by two thirds within one year, building on the extensive work that has been done already on national recovery and resilience plans.
### Possible action

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<td>Member States</td>
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<td>7</td>
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<td>Proposals for new resources (not already planned for the second package of new OR) can be envisaged with the proposal of the new MFF or if a new EU borrowing programme is drafted</td>
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<td>Reform of the fiscal framework</td>
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Establishing greater strategic autonomy for European industry

The issue in short: The challenge and the existing gaps

European industry is central when it comes to achieving the twin green and digital transition of the EU’s economy and society, and making Europe the first climate-neutral continent by 2050. While European industry has strengths (for instance in green tech), it has lagged behind in some key strategic sectors, such as batteries. China provides 93% of the EU’s supply of magnesium (key for aluminium production), while Turkey provides 98% of the EU’s supply of borate (central to the electric motors used in electric vehicles and wind turbines). ASML, the world leader in the production of manufacturing equipment for leading-edge semiconductors, is the only European company among the global top 20 tech companies by market capitalisation.

ASML, the world leader in the production of manufacturing equipment for leading-edge semiconductors, is the only European company among the global top 20 tech companies by market capitalisation. Common weaknesses in strategic European industrial sectors include high dependency on critical raw materials (CRMs) – for instance around half of the materials needed in aircraft production come from third countries. Other weaknesses are insufficient research and development funding, technology gaps, market fragmentation, underinvestment, and lack of skills. Enhancing the strategic autonomy of EU industry means tackling these issues and reducing dependencies on third countries.

The pandemic has, meanwhile, highlighted the broader vulnerabilities of global supply chains, in which EU industry is highly integrated. Disruptions in these global chains may affect critical products and inputs for the EU. The complexity of the chains and the fact that they spread throughout the globe, makes them particularly vulnerable to unforeseen and/or rapidly unfolding occurrences such as natural disasters (more frequent in the global warming era), health crises (another pandemic cannot be ruled out), accidents (such as fires in manufacturing plants) and political developments (such as the war in Ukraine). Supply risks are compounded by the changing global landscape, characterised by rising tensions among the major powers, the weakened role of the WTO, the rise of protectionism, and the increasing deployment of the economy as a geopolitical tool. Rethinking supply chains and commercial routes is therefore high on policy makers’ agenda.

Existing policy responses

Domestic measures

Boosting the strategic autonomy of EU industry requires a mix of coordinated domestic and external policy actions – going beyond the scope of this paper. The Commission adopted a new industrial strategy for Europe in March 2020, seeking to make EU industry more competitive globally and to reinforce Europe’s industrial and strategic autonomy. It introduced an ’ecosystem approach’, based on the close monitoring of strategic dependencies in 14 sensitive industrial ecosystems (e.g. aerospace and defence, electronics) in order to mitigate them. As part of this framework, the Commission adopted a pharmaceuticals strategy, to support the competitiveness, innovation and sustainability of the EU’s pharmaceutical industry.

CRMs

Securing and diversifying supply of CRMs is among the top 10 strategic issues to be addressed to ensure the EU’s freedom and capacity to act in the decades to come. In this field, the EU seeks to take an approach mixing industrial, research and trade policies with international partnerships. The Commission presented an action plan on CRMs in September 2020, aiming to make Europe’s supply...
more secure. The action plan seeks to bolster internal EU capacity building (e.g. by developing viable industrial projects on CRM exploration, extraction, processing and refining), and to strengthen and diversify external sources of CRMs (e.g. by sealing strategic partnerships with resource-rich third countries). Also announced in the new industrial strategy, the action plan on synergies between civil, defence and space industries of February 2021 aims to encourage more effective use of resources and technologies in these sectors, and generate economies of scale. The EU's security and defence capabilities are fragmented, which has increased strategic dependencies over the past few years. The Commission's February 2022 roadmap on security and defence technologies focuses on ways to bolster research, technology development and innovation (RTD&I) and to reduce the EU's strategic dependencies. It promotes an EU-wide strategic approach to improve coordination of EU and national RTD&I programmes and instruments for critical technologies.

The May 2021 update of the industrial strategy focused on addressing the impacts of the pandemic, the evolving global competitive context, and the acceleration of the twin transitions. It put forward a range of additional actions to address strategic dependencies. The Commission identified 137 products and raw materials used in sensitive ecosystems on which the EU is highly dependent (mainly in energy-intensive and health sectors). The technologies identified as strategic areas for Europe's industrial future are active pharmaceutical ingredients, batteries, cloud and edge computing, cybersecurity, hydrogen, IT software, photovoltaic panels, raw materials, and semiconductors.

**Industrial alliances**

The Commission is also supporting new industrial alliances to develop Europe's strategic capacities in key areas, and to facilitate the identification of potential investment projects. These alliances involve a wide range of partners in specific industries and value chains. In recent months, alliances of these kind have been forged in the areas of raw materials, clean hydrogen, industrial data, edge and cloud microelectronics and cloud technologies. Industrial alliances can include specific work strands to reduce strategic dependencies for the security and defence sectors. This is being considered in the alliances for industrial data and semiconductors.

**IPCEIs**

Important projects of common European interest (IPCEIs) have also gained in importance recently as a way to support strategic industrial projects. IPCEIs are a state aid tool designed to overcome serious market failures concerning breakthrough innovation and key infrastructure. Initiated by Member States, they bring together key European players. The Commission has recently approved two IPCEIs concerning the battery value chain (in 2019 and 2021). A new IPCEI on microelectronics was put forward in December 2021 in the context of the EU’s recovery plan. Moreover, the French Presidency of the Council of the EU announced that it would support the development of IPCEIs on hydrogen, electronics, cloud computing, and the healthcare industry.

In December 2021, under the ongoing review of EU competition tools, aimed at enhancing the resilience of the single market and enabling EU industries to lead in the green and digital transitions, the Commission reviewed its criteria for assessing potential IPCEIs. The aim was to align the criteria more closely with EU strategies, making the setting-up of IPCEIs more transparent and making it easier for small and medium sized enterprises (SMEs) to take part.

**Standards**

Safeguarding the EU's capacity to set standards is also key to increasing its industrial competitiveness and strategic autonomy. The Commission adopted a new EU standardisation strategy in February 2022, aiming to leverage the impact, size and integration of its single market to set global standards.
Regulatory frameworks for key industries

The Commission has also put forward a number of regulatory frameworks targeting key industries, for instance the semiconductor (microchip) sector. Microchips are the engines of the digital transition. They are critical technologies, meaning that they are needed across the civil (including security), defence and space industries. The 'European chips act package' adopted by the Commission in February 2022 includes a proposal for a regulation setting up a framework of measures to strengthen Europe's semiconductor ecosystem (the 'chips act'). It is based on three pillars, each focusing on a different timeframe. The first pillar (long-term measures) builds on a 'chips for Europe initiative', bolstering technological capacity building and innovation. The second pillar (medium-term measures) sets up a framework to boost projects aimed at improving the EU's security of supply, by attracting investments and enhancing production capacities. The third pillar (short-term measures) establishes a coordination mechanism between the Member States and the Commission to monitor the supply of chips. Importantly, in the event of supply disruptions and shortages, a 'crisis stage' may be activated, allowing the Commission to implement a range of emergency measures: the Commission will ask undertakings to provide information about their production capacities, or primary disruptions, in order to gain a better understanding of the market situation. Furthermore, the Commission may oblige some foundries to accept and prioritise an order of crisis-relevant products (‘priority rated orders’). The Commission may also decide to act as a central purchasing body on behalf of some Member States for the public procurement of some crisis relevant products for certain critical sectors. Moreover, it could introduce an export control regime in some circumstances. A Commission recommendation on a common toolbox to address semiconductor shortages and an EU mechanism for monitoring the semiconductor ecosystem includes possible crisis response measures that Member States could implement before the new regulation enters into force. The Commission has claimed that the chips act would mobilise more than €43 billion in public and private investments.

The December 2020 proposal for a regulation on a new regulatory framework for batteries aims to enhance circularity and resource efficiency with increased recycling and recovery of critical raw materials, to help enhance Europe's strategic autonomy. It sets minimum levels of recovered cobalt, lead, lithium and nickel from waste for reuse in new batteries. In December 2021, the Commission proposed a hydrogen and decarbonised gas market package – key feedstock for industrial processes. The package aims to strengthen energy security, and global industrial leadership.

Funding

A wide range of EU programmes offer funding that can be used to improve the strategic autonomy of EU industry. More specifically, within the Next Generation EU (NGEU) recovery package, the Recovery and Resilience Facility (RRF, €724 billion (in current prices), i.e. 90 % of Next Generation EU funding), is expected to improve the resilience, crisis preparedness, adjustment capacity and growth potential of Member States, contributing to the strategic autonomy of the EU. It is up to the Member States to choose the reforms and investments to be included in their national recovery and resilience plans (NRRP). These reforms and investments should help make the EU more resilient and less dependent by diversifying key supply chains.

A range of measures are possible. Member States may decide for instance to fund cross-border and multi-country projects, in particular under European flagships – e.g. 'Scale-up' aiming to double the share of EU companies using advanced cloud services and big data by 2025. Each Member State must dedicate at least 20 % of the expenditure for its recovery plan to measures contributing to the digital transition (e.g. investment in digital-related industrial research and innovation). One year on from the introduction of the RRF, the first implementation report shows that 15 NRRPs include measures dedicated to the hydrogen sector. Many investments address the whole hydrogen value chain. Funding for new IPCEIs – on microelectronics (12 RRRPs) and cloud technologies (6 NRRPs) are among the multi-country projects with the highest take-up in the NRRPs. Other EU programmes also allow targeted research and innovation efforts to reduce the gap with global competitors.
and thereby reduce strategic dependencies (Horizon Europe, Connecting Europe Facility, European space programme and European Defence Fund). The European Defence Fund aims to build an integrated EU defence industrial base, investing throughout defence industrial value chains (the EU defence industry being quite fragmented).

International dimension

A major development in the area of transatlantic cooperation was the establishment of the EU-US Trade and Technology Council (TTC) in June 2021, designed to strengthen the partners' technological and industrial leadership. In its joint inaugural statement following the meeting held in Pittsburgh (US) on 29 September 2021, the TTC prioritised areas where it intended to achieve outcomes by the next meeting, scheduled for May 2022 in France. These include work on: standardisation, in particular in artificial intelligence (AI); reduction of strategic dependencies in semiconductor supply chains; and joint tackling of global trade challenges, such as industrial subsidies, unfair behaviour of state-owned enterprises and other trade and market distorting practices, as well as export controls, including in emerging technologies, (with legitimate concerns about forced technology acquisitions). Other strands of work are climate and clean technology, secure and resilient supply chains, active pharmaceutical ingredients and raw materials.

The international dimension of industrial policy focuses on issues such as improving integration of EU companies, not least SMEs, in international value chains; mutual conformity assessments; and influencing the rules and standards affecting industry globally. The EU is also striving to stay at the forefront of the future-oriented industrial technologies that are necessary for the digital transformation and technological sovereignty. It supports cluster collaboration with the third countries, for instance on industrial ecosystems and raw materials, having concluded administrative agreements with Canada, Singapore, South Korea and the US. Negotiations with New Zealand, the UK and South Korea have begun for associated participation (on a co-funding basis) in the Horizon Europe programme.

Autonomy also means establishing a level-playing field through legislative instruments such as the carbon border adjustment mechanism (CBAM) and international procurement instrument, as well as safeguarding the single market and industry against undesirable external influences, whether in the form of foreign investment, distortive foreign subsidies or coercive practices. Another significant initiative in this aspect is the proposal for corporate sustainability and due diligence. The EU has also added disciplines removing or reducing trade barriers and export restrictions of raw materials into many of its multilateral and bilateral trade agreements.

As part of its CRM action plan, the Commission is proposing to forge strategic partnerships with resource-rich countries. It has already established such partnerships with Canada and Ukraine, and commenced other international pilot partnerships with six African countries: Democratic Republic of Congo, Mozambique, Namibia, Gabon, Zimbabwe and Senegal. These efforts, in addition to the TTC, fit into a broader picture of diversifying supply chains and commercial routes important to the EU. Relevant policy tools include: supporting open trade through free trade agreements (FTAs), reinforced with the 2021 Enforcement Regulation; and seeking to reinvigorate and reform the WTO, as experts consider a robust international trade framework to be conducive to increasing industrial competitiveness and investment in knowledge-intensive industries.

The Versailles Declaration of EU Heads of State or Government of 11 March 2022 reiterated the urgent need to secure the EU’s supply of CRMs, chips, and digital technologies. It stressed the
importance of research and innovation, IPCEIs and alliances to support strategic industrial sectors, and stressed that efforts would be made to complete the EU’s trade and competition policy toolbox.

**Figure 42: Key measures to establish greater strategic autonomy for European industry**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2015</td>
<td>EU circular economy action plan</td>
</tr>
<tr>
<td>May 2014</td>
<td>Seventh list of CRMs</td>
</tr>
<tr>
<td>May 2014</td>
<td>Industrial alliance on microelectronics</td>
</tr>
<tr>
<td>February 2021</td>
<td>First EU list of CRMs</td>
</tr>
<tr>
<td>October 2017</td>
<td>Third EU list of CRMs</td>
</tr>
<tr>
<td>December 2018</td>
<td>Fourth EU list of CRMs/ EU action plan on microelectronics</td>
</tr>
<tr>
<td>March 2020</td>
<td>Industrial alliance on batteries</td>
</tr>
<tr>
<td>December 2019</td>
<td>Second IPCEI on clean hydrogen</td>
</tr>
<tr>
<td>September 2020</td>
<td>Industrial alliance on raw materials</td>
</tr>
<tr>
<td>September 2020</td>
<td>Fourth EU list of CRMs/ EU action plan on CRMs</td>
</tr>
<tr>
<td>July 2020</td>
<td>Industrial alliance on microelectronics</td>
</tr>
<tr>
<td>January 2021</td>
<td>Second IPCEI on electronics</td>
</tr>
<tr>
<td>December 2021</td>
<td>New IPCEI on microelectronics pre-notified to the Commission</td>
</tr>
</tbody>
</table>

Source: EPRS.

**Obstacles to implementation**

EU industrial policy is developed and implemented at both EU and Member State levels, but with the main responsibility resting with the latter. As this policy is cross-cutting, and has both horizontal and sectoral dimensions, it is complex and difficult to monitor with clear targets, indicators, measures and time scales. The multitude of interests, and the complex and dynamic environment in which industry, technology and geopolitics are intertwined mean that picking winners is risky. Furthermore, the EU lacks strong competences in some areas crucial to the digital transformation of industry, with a shortage of digitally skilled workers, for instance. Reshaping and diversifying EU supply chains and commercial routes are predominantly decisions for the private sector.

Furthermore, some observers have highlighted that the contribution of the RRF to strategic autonomy is too vaguely addressed in the RRF Regulation and in the Commission guidance for Member States. Furthermore, the RRF impact on industry will be suboptimal as NRRPs are too nationally oriented. In addition, the incentive for Member States to set up cross-border projects is too weak. Some analysts consider that the participation of the EU in the global subsidy race in the chip sector is a mistake. The chips act has many flaws – it is too vague on the type of foundries that should be supported, and on the functioning of the security of supply mechanism. In addition, the involvement of Member States in a body advising the Commission entails the risk that they might choose to advance their own national priorities rather than European ones. It has been argued that the revision of the Commission guidance in November 2021 failed to address any of the IPCEIs’ major flaws, e.g. the lack of broad-based participation of Member States and SMEs, and the lack of transparency on the decision to invest public funds and on project governance. This situation risks undermining fair competition within the single market.

The TTC may fail to deliver on its ambitious cooperative agenda if the differences between the Member States on issues such as the creation of national industrial champions or a chips manufacturing ecosystem prevent the EU from speaking with one voice and as an equal with the US. Furthermore, important developments outside of the scope of the TTC, such as the EU’s ambitious efforts to regulate global digital markets, which sometimes cause concerns in the US, may make it harder to reach a transatlantic consensus. There are also important nuances on approach of
both sides to China, which may diminish the TTC’s effectiveness. At this stage it is impossible to predict whether the TTC will establish meaningful cooperation – a sort of strategic interdependence of industries to create synergies – or if it will end up delivering only minimal results, such as making sure industrial projects on one side are not unintentionally hampered by another.

Attempts at forming meaningful alliances on raw materials may be hampered by a tightening of the commodities markets and global scarcities arising from Russia’s invasion of Ukraine.

Policy proposals by experts and stakeholders

On a conceptual level, strategic autonomy is not precisely and uniformly defined in EU industrial policy. Establishing a dedicated governance system based on common definitions and criteria would help to avoid national priorities from clashing with EU level priorities. To increase Europe’s strategic autonomy in rare earth elements, stakeholders have recommended: creating a level playing field with rare earth producers worldwide (such as China) that have lower production costs owing to state subsidies and lower social, labour, and environmental standards; encouraging downstream industry to diversify its supply chains, work with European and local suppliers, and support the development of capacities for a circular economy of electric motors; ensuring that end-of-life products and waste materials containing rare earths stay in Europe, by facilitating the re-processing and recycling of products through regulations and standards; and leveraging private investments in the emerging European rare earths value chain using all financial levers, including state aid tools (e.g. a dedicated IPCEI).

To increase EU industry’s resilience to shocks along its value chains, some analysts have stressed that it is necessary to improve the governance and transparency of strategic value chains. In addition, public-private partnerships (PPPs) could help to deliver on strategic projects. Importantly, it is necessary to ensure that measures taken at EU, national, regional and local levels to support industry are taken in a coherent way. Industry representatives have highlighted that better resilience of supply chains can be achieved through a combination of approaches, ranging from finding substitutes, encouraging diversification, forging strategic relationships with suppliers, stockpiling, or encouraging domestic production. Industrial strategic autonomy needs to be rooted in digital and green transformation. To boost the latter, the EU could consider establishing a European Climate and Sustainable Development Bank, aiming to export the European Green Deal policies. This would allow EU industry to enter new, rapidly growing markets, and use the gains to further improve its standing as a champion of environmentally-friendly manufacturing. To achieve meaningful breakthroughs in green technologies, global cooperation in research and development – particularly during pre-commercial phases – can produce cost advantages, allow risk-sharing and achieve greater efficiencies from the combination of complementary knowledge and synergies. The EU could also step up transatlantic research and innovation cooperation significantly by using the reenergised relationship with the US to push for its association with the Horizon Europe programme, more specifically within the digital, industry and space cluster. EU-US collaboration includes the defence sector. To monitor digital transformation of industry at national level, the EU could develop a system in which the Council, the Commission and the Parliament monitor progress made by each Member State and the EU. This could be aligned with the goals of the digital decade. After each country designs a plan to achieve concrete results – a national decade strategic roadmap – the Commission could report annually on progress. This could also include cooperation with like-minded partners from Asia or North America. In order not to leave European SMEs behind, a dedicated digital policy for SMEs may be necessary. It would comprise targeted use of digital innovation hubs, supporting the retraining and digitalisation of the SME workforce, and dedicated financing instruments.

Looking beyond the mapping of strategic dependencies carried out by the Commission, some experts suggest that the next step would be an in-depth analysis of the strategic value chains to identify the weakest links and find credible alternatives to offset their vulnerabilities. This exercise
should also include identifying missing skills and professional profiles and lead to an action plan with timed targets and urgent measures to be taken at EU and Member State level.

Position of the European Parliament

Right from the beginning of the pandemic, the European Parliament stressed that the recovery package should improve the EU’s resilience and strategic autonomy. In its resolution of 25 November 2020 on a new industrial strategy for Europe, Parliament stressed that securing the EU’s sovereignty and strategic autonomy required an autonomous and competitive industrial base, and huge investment in research and innovation in key enabling technologies, innovative solutions, and key value chains. Parliament believes that investment should make it a priority to support the security, defence, climate technology, food sovereignty and health sectors. Supply chains should be strengthened, shortened, made more sustainable and diversified. Moreover, for Parliament, Europe’s strategic autonomy cannot be achieved without a competitive and sustainable EU ecosystem for CRMs. Europe needs to bolster its position in all stages of the raw materials value chain. Parliament also called on the Commission to devise a strategy for smart reshoring, to redeploy industries to the EU, increase production and investment, and relocate industrial manufacturing.

In its resolution of July 2021 on trade-related aspects and implications of Covid-19, Parliament called for incentives, including through state aid, for EU businesses to make their value chains more sustainable and to shorten or adjust their supply chains where it could benefit the EU’s economy, resilience, geopolitical objectives and strategic autonomy.

Parliament believes that an integrated approach throughout the CRM value chain, from waste collection and product design for recyclability to material recovery, is an essential strategy to increase the EU’s CRM supply, as explained in its resolution of 24 November 2021 on a European strategy for CRMs. An active industrial policy is needed to support the value chain, supporting for instance research and innovation on the recycling and substitution of CRMs, and product design. EU support and funding is required to improve efficiency, substitution, recycling processes and closed material cycles. Parliament also called on the Commission and the Member States to set up an IPCEI on CRMs to reduce criticality and dependence, dealing with recycling, reuse, substitution, reduction of material use and mining. The projects supported under the IPCEI should unlock the unfulfilled potential in CRM-rich EU countries. Furthermore, Parliament recommended that the Commission encourage Member States to carry out strategic stockpiling as a way to reduce CRM dependencies, and propose minimum recycled CRM content targets, CRM recycling targets and a monitoring framework. Concerning CRM sourcing in the EU, Parliament supports responsible and sustainable projects, and has stressed that awareness of the environmental footprints of imported CRMs from third countries should be raised. The EU should also diversify its supply sources of CRMs to reduce third country reliance.

In focus: Impact of the conflict between Russia and Ukraine on European industry

This paper was drafted just days after Russia invaded Ukraine. Without doubt the war will have far-reaching consequences for European industry and global supply chains. CRMs can be widely found in Ukraine, which holds deposits of 20 out of 30 such materials. Ukraine is home to half of the world’s neon gas production – critical for manufacturing semiconductors. In July 2021, the EU and Ukraine had launched a strategic partnership to enhance cooperation in the field of raw materials and batteries. The EU car industry has already been affected by the closure of small but important suppliers in Ukraine.
The sanctions and disrupted trade routes are also hindering car and parts shipments to and from Russia. Moreover, parts of the European industry rely on raw materials imported from Russia. For instance, 20% of the EU’s supply of phosphate rock, which is on the EU’s CRM list and is used to produce mineral fertilisers, comes from Russia. Although Russia has not yet included raw materials in its sanctions, their prices are skyrocketing and some – including nickel, palladium (Russia represents 40% of the world’s production) and platinum – will not be easy to source from elsewhere. The scarcity of these products will reverberate throughout industry as they are used in multiple products.

Furthermore, as energy costs are expected to skyrocket, energy-intensive industries, such as automotive and chemical, are expected to be hard hit. This may have grave consequences for the future of EU industry as many energy-intensive industries are embedded in strategic value chains. Around half the energy that powers EU industry is based on gas. On the other hand, the conflict is expected to further bolster the EU’s efforts to reinforce its defence industry. Commentators are divided on whether the conflict will accelerate or slow down the phasing out of fossil fuels – both possibilities having significant consequences for EU industry and its competitiveness.

Figure 43: Pyramid of instruments at the disposal of the EU and its Member States
<table>
<thead>
<tr>
<th>Possible action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EP requests</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Objective / instrument</th>
<th>Likely lead actors</th>
<th>What could be done?</th>
<th>References (sources of ideas)</th>
<th>Degree of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set up an IPCEI on CRMs</td>
<td>Member States/Commission</td>
<td>Plan for the EU’s demand for the twin transitions&lt;br&gt;Cover all relevant topics in order to reduce criticality and dependence&lt;br&gt;Unlock unfulfilled potential in CRM-rich EU Member States</td>
<td>Parliament resolution of 24 November 2021 on a European strategy for CRMs</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Establish an EU-level target for resource efficiency&lt;br&gt;Mandatory targets for the use of recovered materials&lt;br&gt;Set out roadmaps for the deployment of breakthrough technologies and new sustainable business models</td>
<td>Commission/Council/Parliament</td>
<td></td>
<td>European Parliament resolution of 15 January 2020 on the European Green Deal</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Determine the minimum volumes of CRMs required for the twin transitions</td>
<td>Commission</td>
<td>Conduct a comprehensive, scientific and evidence-based impact assessment on this topic</td>
<td>EP resolution of 24 November 2021 on a European strategy for CRMs</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Encourage strategic stockpiling of CRMs</td>
<td>Commission/Member States</td>
<td></td>
<td>EP resolution of 24 November 2021 on a European strategy for CRMs</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Set up minimum recycled CRM content targets and dedicated CRM recycling targets</td>
<td>Commission/Council/Parliament</td>
<td></td>
<td>EP resolution of 24 November 2021 on a European strategy for CRMs</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Member States to uphold their commitment to invest 3% of their GDP in research and development</strong></td>
<td><strong>Member States</strong></td>
<td><strong>European Parliament resolution of 25 November 2020 on a new industrial strategy for Europe</strong></td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td><strong>Temporary ban on foreign takeovers of European companies in strategic sectors by state-owned enterprises or companies linked to third-country governments</strong></td>
<td><strong>Commission</strong></td>
<td><strong>European Parliament resolution of 25 November 2020 on a new industrial strategy for Europe</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Proposals submitted by the European Commission / ongoing processes**

<table>
<thead>
<tr>
<th></th>
<th><strong>EU chips act package</strong></th>
<th><strong>Commission</strong></th>
<th><strong>Strengthen the EU chips ecosystem, improve international cooperation</strong></th>
<th><strong>Chips act package, including legislation (ongoing)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td><strong>Proposal for a regulation on foreign subsidies distorting the internal market</strong></td>
<td><strong>Commission</strong></td>
<td><strong>Set up rules for investigating foreign subsidies that distort the internal market and for redressing such distortions</strong></td>
<td><strong>Proposal tabled by the Commission (ongoing)</strong></td>
</tr>
<tr>
<td>9</td>
<td><strong>Review of competition policy tools</strong></td>
<td><strong>Commission</strong></td>
<td><strong>Enhance the resilience of the single market and enable EU industries to lead in the green and digital transitions</strong></td>
<td><strong>On-going</strong></td>
</tr>
<tr>
<td>10</td>
<td><strong>International procurement instrument</strong></td>
<td><strong>Commission</strong></td>
<td><strong>Promote reciprocity and level playing field on procurement markets</strong></td>
<td><strong>On-going</strong></td>
</tr>
<tr>
<td>11</td>
<td><strong>The anti-coercion instrument</strong></td>
<td><strong>Commission</strong></td>
<td><strong>Address the increasing global weaponisation of trade and investment policies</strong></td>
<td><strong>On-going</strong></td>
</tr>
<tr>
<td>12</td>
<td><strong>Due diligence and corporate sustainability</strong></td>
<td><strong>Commission</strong></td>
<td><strong>Share EU values across the world</strong></td>
<td><strong>On-going</strong></td>
</tr>
<tr>
<td>No.</td>
<td>Title</td>
<td>Responsible Authority</td>
<td>Description</td>
<td>Source(s)</td>
</tr>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td>CBAM</td>
<td>Commission</td>
<td>Create level playing field for industry</td>
<td>On-going</td>
</tr>
<tr>
<td></td>
<td><strong>Policy suggestions from think tanks and academia / policy examples from third countries</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 15  | Improve the IPCEI framework                                           | Commission            | Publish information on projects and decisions in an accessible and timely manner  
Involve third parties in the decision making – the European Parliament, public debates and stakeholder consultations.  
Define precisely the criteria for granting state aid under IPCEIs | Bruegel                                                                 |
| 16  | National decade strategic roadmap                                     | Member States         | Member State dimension of digital decade                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Elcano Royal Institute and Clingendael                                   |
| 17  | European climate and sustainable development bank                     | Member States         | Increase effectiveness of EU funding, and impact global agenda                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | The High-Level Group of Wise Persons on the European financial architecture for development |
Consolidating strategic ties with democracies

The issue in short: The challenge and the existing gaps

Democracy and the interests of democratic states face multiple threats. Increasing geopolitical competition among major powers has driven democratic and undemocratic governments apart, both in bilateral relations and in multilateral forums, and also created tensions between fellow democracies beset by the rise of populism and nationalism. Yet global military, economic, social, sanitary, environmental or other challenges require multilateral governance more than ever. After the severe blows dealt to international cooperation by the actions of then US President Trump and the 6 January 2021 attack on the US Congress, Joe Biden's election opened a window of opportunity for democracies to work together in both informal coalitions and multilateral settings.

The EU and other democratic players also face direct threats from non-democracies, chief among them Russia and China, which increasingly act in concert. Russia has begun a war to challenge the existing security order in Europe and democracy in its neighbourhood, and also in Africa, while China uses trade restrictions to bully democracies in Europe and elsewhere that criticise it or offer support for democratic Taiwan. Both Russia and China are leading sources of disinformation aimed at democratic societies in the EU and elsewhere. In developing economies, China challenges EU interests first by using its Belt and Road Initiative (BRI) to draw developing countries into debt traps in order to acquire rights to infrastructure and resources beyond its borders, and second by providing an alternative, authoritarian model of development. In a world in which hard power still matters and national self-interest prevails, the EU – which is centred around soft power and is bound to balance the pursuit of its own interests with respect for international values – has constantly aimed to better leverage its economic and diplomatic influence, coordinate more effectively among its members, and build strategic partnerships with other major democracies and international regional organisations such as the African Union and ASEAN, which commit to democratic principles in their founding treaties.

Existing policy responses

Cooperating with other democracies is an important axis of the EU’s engagement in multilateral settings. The EU action plan on human rights and democracy 2020-24 and the 2021 joint communication on strengthening the EU's contribution to rules-based multilateralism highlight the need to build and strengthen coalitions of like-minded partners on key priorities in multilateral forums. The EU supports the strong pro-democracy orientation of G7 policies, as defined during the 2021 Summit and ministerial meetings. Given its weight as a trade bloc and its full membership in the World Trade Organization (WTO), the EU has an important role to play in preserving and reforming the multilateral trade system and continuing its values-based trade policy. EU cooperation with democratic partners, chiefly the United States, but also Japan, remains crucial in this respect.

Strengthening democracy is a key objective of EU bilateral engagement with both developing and industrialised countries. In 2021, the EU launched the new Global Europe Instrument for 2021-2027. Its geographical programming covering the entire world includes an objective of strengthening good governance, democracy, rule of law and human rights in cooperation with partner countries' governments. The thematic part – much smaller in financial terms – provides support to civil society globally, as well as direct support to democracy and human rights actions circumventing
governments. In addition to this type of aid, the EU has provided substantial macro-financial assistance to fragile democracies in its neighbourhood encountering economic difficulties, such as Ukraine and Moldova, conditional on fighting corruption and respecting judicial independence. The recently upgraded European Peace Facility (EPF) provides funding to strengthen partners’ capacities in military and defence matters. The first measure adopted is directed at Ukraine. The EU includes democratic objectives in its human rights dialogues and political dialogues with partners.

The EU further cooperates with partner countries and international organisations such as the Council of Europe and its bodies, particularly the Venice Commission, as well as with the Organisation for Economic Co-operation and Development (OECD) to strengthen rule of law at home and in third countries, for example in the fight against corruption or tax evasion. Coordinated sanctions by the EU and major democracies are used to respond to human rights violations in authoritarian regimes, such as Belarus. In response to Russia’s attack on Ukraine, the EU has coordinated its massive financial and economic sanctions with its democratic partners in the world.

Under the Biden administration, the USA and the EU have together launched or revived vehicles for democracy-to-democracy cooperation on the pandemic, the climate, trade, security and democracy. A new EU-US Trade and Technology Council (TTC) met at ministerial-level for the first time in September 2021 in Pittsburgh (USA), and is expected to meet again in France in May 2022. The TTC aims to achieve transatlantic consensus fit for the democratic world on common standards, resilient supply chains, tech regulation, global trade challenges, climate and green tech, as well as investment screening and export controls. A new EU dialogue on security and defence is set to launch in ‘early 2022’, while a EU-US high-level dialogue on Russia was announced in June 2021 (although has yet to meet formally, possibly superseded by events). Two high-level meetings of the EU-US dialogue on China were launched in the final months of the Trump Administration. The EU and NATO are also stepping up cooperation.

Figure 44: Key measures to consolidate strategic ties with democracies

Source: EPRS.

The EU has also concluded free trade agreements (FTAs) with major democracies including Canada, Japan, South Korea and the Andean Community countries; is updating FTAs with Chile and Mexico; and is negotiating new FTAs with Mercosur, Indonesia, Australia and New Zealand. The EU is also exploring deeper trade and investment ties with Taiwan and India. Trade liberalisation with democratic partners could allow the EU to diversify its trading relationships, reducing its strategic dependence on non-democratic partners who may be unreliable and are less likely to share common interests. In Africa and the Indo-Pacific – two regions where Russia and China are
increasing their influence over third countries – the EU has responded with a joint EU-Africa strategy launched in 2007, and an EU strategy for cooperation in the Indo-Pacific published in 2021. The latter strategy identifies cooperation on semiconductors with democratic Japan, Korea and Taiwan as a priority. The EU is also drawing lessons from Taiwan on combating disinformation, given Taiwan’s exemplary role in this struggle against China. In November 2021, a European Parliament delegation visited Taiwan to study its efforts to combat interference and manipulation campaigns. The Commission has also launched the ‘global gateway’ initiative to provide a source of investment in digital, climate, energy, transport, health, education and research infrastructure in developing countries, and an alternative to China’s BRI.

Obstacles to implementation

Supporting democracy in cooperation with like-minded partners in multilateral forums faces multiple obstacles. The universal values, including fundamental freedoms and human rights, on which the multilateral order is based are under virulent attack from authoritarian powers, while illiberal encroachments undermine the integrity of multilateral bodies and norms that defend human rights. To be an influential diplomatic actor, the EU needs to act as a coherent player and bring its Member States together behind the pursuit of a global liberal democratic agenda.

Global democratic alliances, such as the Summit for Democracy, must convince in terms of practical effectiveness and avoid strengthening authoritarian regimes’ resolve and coordination, particularly that of Russia and China, and endangering much-needed global collective action.

Difficult regional environments, state fragility, as well as internal polarisation and conflict, and protracted economic crises have been insurmountable obstacles in supporting transitions to democracy in Afghanistan, Mali and, to a lesser extent, in Tunisia (all countries to which the EU has provided extensive assistance). The EU makes its aid conditional on respect of democratic standards and has engaged with partners to incentivise reforms. However donors providing aid with ‘no strings attached’, such as China, undermine the effectiveness of the EU's approach. Serious democratic backsliding in large democracies such as India and Brazil poses another obstacle to the EU's ambitions to build values-based partnerships.

The EU-US TTC is perceived by some as a recognition of the failure of previous EU-US efforts to consolidate economic integration and set global standards jointly via the proposed Transatlantic Trade and Investment Partnership. Enduring regulatory differences between the two sides may hinder their ability to deliver ambitious common positions on such issues as data governance and technology platforms. Moreover, while the EU and the USA have made significant progress on ending or mediating disputes on the Boeing-Airbus subsidies issue, US Section 232 tariffs on EU steel and aluminium imports, and taxation of major US and EU companies, the TTC has yet to produce forward-looking deliverables from any of its sectoral working groups.

The EU has also shown itself willing to advance trade integration with democratic and non-democratic partners alike. In December 2020, a ‘political agreement’ was announced on a comprehensive agreement on investment (CAI) with China, shortly before the Biden Administration took office. Some observers argued that the CAI undercut transatlantic cooperation on the challenges China poses to the multilateral trading system. In addition, while the EU has successfully concluded FTAs with Japan and Canada (even if the latter awaits ratification by all Member States), progress on FTAs with other democratic partners is slower than might have been expected: negotiations with Australia were delayed by the diplomatic dispute between that country and France over the AUKUS announcement, while France reportedly sought to postpone the conclusion of negotiations with New Zealand and Chile until after its presidential election. Some analysts argue...
that the EU has taken a more protectionist turn since the failure of TTIP, just as the USA does the same.

The EU’s global gateway initiative may likewise fall short. Some have criticised its five-year €300 billion investment budget as a mere repackaging of existing initiatives, combined with ‘questionable’ assumptions about leveraging private investment. Others have compared the annual sum (€60 billion) unfavourably with China’s estimated €1 150 billion in foreign loans and outstanding export credits, and note that China has grown more sophisticated in its approach to investment in other countries, taking greater care to involve local workers in projects. If true, an overly confrontational approach to Chinese BRI lending may be less effective than allowing recipient countries to combine multiple sources of investment.

Policy proposals by experts and stakeholders

Proposals on formats of cooperation among major democracies include: extending the G7 to a G10 format, concluding a charter for an alliance of democracies, or creating a coalition of leading democracies on new technologies (a T-12 Group). Such proposals include EU countries but not necessarily the EU itself. One area where democracies can do more together is the digital realm. Preserving a free and open internet and mainstreaming human rights in new technologies were among the priorities proclaimed at G7 ministerial meetings in 2021 and supported by the EU. Reducing EU dependency on energy imports from authoritarian states, especially Russia, has now become an urgent objective. Reaching it also presupposes reinforcing cooperation with democratic partners.

Rethinking EU democracy support after the recent democratisation failures appears unavoidable. Experts note that the EU needs to exercise self-criticism; draw lessons; better take local conditions into account; and make a realistic assessment of the situation on the ground when it provides democracy assistance. Improving the democratic record at home is also crucial for the EU’s global influence.

Stakeholders and think-tanks in the USA and EU are broadly supportive of transatlantic cooperation on multilateral trade policy reform and standards development. Many therefore welcome the EU-US TTC, though some would expand the scope of cooperation to other policy areas, such as space. Some suggest features that have not yet been incorporated in the TTC, such as structured involvement of the US Congress and the European Parliament, as well as NGOs and other stakeholders. Others stress that the EU should act with a sense of urgency, given the possibility of a less partnership-minded administration being voted into office in 2024.

On the broader EU trade agenda, observers recommend, inter alia, negotiating a new data transfer framework agreement with the USA, to help guard against nefarious data acquisition by authoritarian powers like China; and coordinating industrial policies and technology regulation with countries like the USA, Japan and South Korea, as well as with Taiwan. On the EU’s proposed global gateway, think-tank recommendations include combining new funding with addressing fragmentation in current EU development spending; integrating the global gateway with the external dimension of the European Green Deal; and downplaying the strategic aspects of the initiative, to avoid it becoming bogged down in geopolitical controversy.

Position of the European Parliament

In its 2022 resolution on the implementation of EU common foreign and security policy, the Parliament calls for the EU to promote an alliance of democracies worldwide, and insists on the need for better cooperation among democracies to counter malign interference and disinformation. The Parliament also recommends that the EU strengthens its cooperation on election observation with all relevant partners. In its 2022 resolution on human rights and democracy in the world, the Parliament calls on the EU and its Member States to ‘make more concerted efforts to address the
challenges to human rights worldwide, both individually and in cooperation with like-minded international partners, including in the UN'. With regard to EU democracy assistance, in its 2019 legislative resolution on NDICI, the Parliament insisted on strengthening democracy promotion across EU aid, and on the consistent application of conditionality to beneficiary partner countries. The European Parliament supports the establishment of a United Nations Parliamentary Assembly (UNPA) within the UN system, aiming to increase the democratic character of the global organisation, and has called for a stronger parliamentary dimension to the WTO.

In a resolution adopted on 6 October 2021, the European Parliament called on the European Commission and the High Representative of the Union for Foreign Affairs and Security Policy/Vice-President of the Commission for a Stronger Europe in the World (HR/VP) to reassert the relevance of the strategic transatlantic relationship, to reinvigorate multilateralism, strengthen democracy and promote human rights worldwide. Specifically, the Parliament called for the establishment of a transatlantic legislators assembly; regular meetings between the Parliament's Foreign Affairs and International Trade Committees and their US counterparts; strengthened interparliamentary cooperation between Members of the European Parliament, Members of Congress, members of the national parliaments of the EU Member States and members of the 50 US State legislatures. It called for a coordinated approach in bilateral FTAs and at multilateral level to address forced labour and exploitative labour conditions and to improve respect for workers' rights and environmental standards. The Parliament also reiterated its call to consider EU support at the WTO for a temporary waiver on the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), in line with the US position (but not yet with the Commission's).

The same resolution also calls for: a common EU-US offer of investing in global infrastructure initiatives; for the EU and the USA to jointly provide economic, political and operational support to the African Union, the G5 Sahel Force and the Economic Community of West African States; for the creation of a Transatlantic Political Council for systematic consultation and coordination on foreign and security policy, led by the VP/HR and the US Secretary of State; integration of a parliamentary dimension into the EU-US high-level strategic dialogue on China; and for collective economic defence via collaboration with like-minded democracies against China's economic coercion. Parliament has consistently supported proposals to negotiate FTAs with democratic partners, while underlining that negotiations should be transparent and provide for parliamentary involvement. This position is reflected, for example, in the 5 July 2016 resolution on a forward-looking and innovative future strategy for trade and investment, which included a call to launch FTA negotiations with Indonesia; and in the 26 October 2017 resolution on the negotiating mandate for trade negotiations with Australia, and the 26 October 2017 resolution on the negotiating mandate for trade negotiations with New Zealand.

Parliament called for a deeper strategic relationship with India with a strong parliamentary dimension, in a 29 April 2021 resolution. In a 21 October 2021 resolution, Parliament also called on the Commission to begin a scoping exercise on a bilateral investment agreement with the Taiwanese authorities, and for the EU and Member States to deepen cooperation with Taiwan on confronting disinformation. Parliament's 21 January 2021 resolution on connectivity and EU-Asia relations, encourages the Commission and the European External Action Service (EEAS) to create a global EU connectivity strategy aligned with regional policies, including the Eastern Partnership, the European Neighbourhood Policy. The joint communication on relations with Latin America and the Caribbean, and the Indo-Pacific strategy should be aligned with the strategy, and it should aim to strengthen partnerships with democracies around the world which share the EU's values.
In focus: an EU global gateway to fund infrastructure development abroad

On 1 December 2021, the Commission published a joint communication on a ‘global gateway’ (GG) infrastructure funding initiative for developing countries. Building on existing EU development aid as well as previous external connectivity strategies, the initiative is meant to fund up to €300 billion in investments in 2022-2027 in digital, climate and energy, transport, health, and education and research projects that are socially and economically sustainable, and run according to democratic and high-quality governance norms. With its focus on sustainability and social progress, the GG stands in explicit contrast to infrastructure funding originating from China via that country’s BRI, much of it apparently in the form of lending of dubious sustainability, motive and economic impact. The GG should be seen in the context of international efforts to construct a democratic-model alternative to the BRI.

The EU, collectively with its Member States, is already the world’s leading donor of official development assistance (ODA), but GG is intended to as an explicit counter-offer, not just to Chinese public and private money, but also to China as a rival authoritarian model of development in competition with the democratic model promoted by the EU and its democratic partners.

Figure 45: Pyramid of instruments at the disposal of the EU and its Member States

Table: Possible action

<table>
<thead>
<tr>
<th>Objective / instrument</th>
<th>Likely lead actors</th>
<th>What could be done?</th>
<th>References (sources of ideas)</th>
<th>Degree of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP requests</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>Promote an alliance of democracies worldwide</td>
<td>EEAS/Commission/Council Member States</td>
<td>Global alliance of democracies</td>
<td>report on the CFSP 2021</td>
</tr>
<tr>
<td></td>
<td>More effective democracy assistance to developing countries</td>
<td>Commission/Council/Member States</td>
<td>More coherent application of conditionality; better integration of democracy support in the geographic programming</td>
<td>European Parliament resolution</td>
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<tr>
<td>3</td>
<td>Transatlantic legislators’ assembly</td>
<td>European Parliament/United States Congress</td>
<td>Structured parliamentary dialogue and diplomacy on shared interests and issues</td>
<td>European Parliament resolution</td>
</tr>
<tr>
<td>4</td>
<td>Transatlantic Political Council</td>
<td>EEAS/Council/United States administration</td>
<td>Structured foreign policy dialogue and common positions</td>
<td>European Parliament resolution</td>
</tr>
<tr>
<td>5</td>
<td>Common EU-US global infrastructure funding offer</td>
<td>Commission/Council/Member States/United States administration</td>
<td>EU/Member State development aid could be pooled with US aid to maximise the counter-offer to China’s BRI</td>
<td>European Parliament resolution</td>
</tr>
<tr>
<td>6</td>
<td>Deeper EU-India strategic partnership</td>
<td>EEAS/Council/Indian government</td>
<td>Regular multi-level dialogues, including summits</td>
<td>European Parliament resolution</td>
</tr>
<tr>
<td>7</td>
<td>EU-Taiwan bilateral investment agreement</td>
<td>European Commission</td>
<td>Foster investment ties with a leading technology manufacturer</td>
<td>European Parliament resolution</td>
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**Proposals submitted by the European Commission / ongoing processes**

<table>
<thead>
<tr>
<th></th>
<th>Work with like-minded countries globally to support multilateralism</th>
<th>EEAS, Commission</th>
<th>Various diplomatic and political actions</th>
<th>Commission Communication</th>
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<tbody>
<tr>
<td>9</td>
<td>European Peace Facility</td>
<td>EEAS/Council</td>
<td>An off-budget instrument to finance EU action with military dimensions.</td>
<td>Legislation in force</td>
</tr>
<tr>
<td>10</td>
<td>Global Europe</td>
<td>Commission/EEAS</td>
<td>EU overarching instrument for development aid, including for governance</td>
<td>Legislation in force</td>
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<tr>
<td>11</td>
<td>Macro-financial assistance</td>
<td>Commission</td>
<td>Favourable EU loans for countries in the neighbourhood experiencing financial difficulties</td>
<td>Instalments disbursed to Moldova, Ukraine</td>
</tr>
<tr>
<td>13</td>
<td>EU-US Trade and Technology Council</td>
<td>European Commission/United States administration</td>
<td>Permanent working groups to coordinate tools and legislation on trade, technology and standards</td>
<td>TTC in operation</td>
</tr>
<tr>
<td>14</td>
<td>Free trade agreement negotiations with Japan</td>
<td>European Commission</td>
<td>Deep economic integration with a major democracy</td>
<td>Agreement in force</td>
</tr>
<tr>
<td>15</td>
<td>Free trade agreement with Canada</td>
<td>European Commission</td>
<td>Deep economic integration with a major democracy</td>
<td>Agreement in force</td>
</tr>
<tr>
<td>16</td>
<td>Free trade agreement negotiations with democracies (Australia, Indonesia, Mercosur etc.)</td>
<td>European Commission</td>
<td>Deep economic integration with a major democracy</td>
<td>Council negotiating mandate for Commission; European Commission text proposals</td>
</tr>
<tr>
<td>17</td>
<td>Global Gateway</td>
<td>European Commission/Member States/European development lenders</td>
<td>Provide a high-quality source of infrastructure funding for developing countries</td>
<td>Joint communication by the European Commission and the High Representative</td>
</tr>
<tr>
<td>18</td>
<td>Coordinated sanctions</td>
<td>European Commission/Member States/other major democracies</td>
<td>Adopt coordinated sanctions (under the EU global sanctions regime or other sanctions)</td>
<td>EU sanctions map</td>
</tr>
</tbody>
</table>

**Policy suggestions from think tanks and academia / policy examples from third countries**

<p>| | | | |</p>
<table>
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<tbody>
<tr>
<td>19</td>
<td>Various proposed coalitions of democracies (including a charter)</td>
<td>Not all mention EU as a possible member</td>
<td>Extending G7 to a G10 format a T-12 group of democracies leading new technologies</td>
</tr>
<tr>
<td>20</td>
<td>Rethink EU democracy support</td>
<td>Commission/EEAS</td>
<td>Learning from failure in countries where EU was most invested</td>
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</tr>
<tr>
<td>21</td>
<td>Defend freedom in the use of new technologies</td>
<td>Commission/EEAS/other liberal democracies</td>
<td>Oppose attempts by authoritarian regimes to encroach on digital technologies, particularly the internet</td>
</tr>
<tr>
<td>22</td>
<td>New EU-US data transfer agreement designed to protect against data acquisition by non-democratic actors</td>
<td>European Commission/United States administration</td>
<td>Prevent abuse of EU and US citizens' data by non-democratic authorities</td>
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</table>
Building a healthier online environment for healthy democracies

The issue in short: The challenge and the existing gaps

The last two decades have been marked by the unprecedented development of the online world, giving rise to new ways to work, shop, socialise and spend time online. This has provided new opportunities for citizens to access political information, discuss issues, and engage in politics, as well as new possibilities for political actors to influence public opinion, mobilise people and organise electoral campaigns. Online ecosystems are thus likely to have a great impact on democratic politics and on broader democratic institutions in societies in the EU and elsewhere.

Online environments and digital technologies underpinning them, such as algorithmic decision systems, pose several key challenges to democracy, including:

- **Distortion of public opinion through online filtering, ranking and moderation** of content and interactions (e.g. via newsfeed algorithms, de/prioritisation or removal of content, polarisation of views, suspension of accounts). This is, at least partly, an unintended consequence of the business models and technologies supporting online ecosystems.
- **Manipulation of political views and preferences through online disinformation** – the deliberate use of algorithms, bots, trolls, deep fakes, etc. to spread false content. Whereas disinformation is a result of a complex interaction between people and ecosystems, manipulative algorithmic systems play a key role in amplifying disinformation.
- **Distortion of electoral competition through deceiving online messages and political adverts** – the use of intrusive and covert techniques to persuade, confuse, or intimidate voters from casting their votes (political microtargeting). The speed and efficiency of online political campaigns that rely on extracting and analysing troves of data to target highly specific groups increases the negative impact of disinformation and manipulative ads.
- **Weakening the integrity of elections though foreign interference and cyber-attacks** – concerted campaigns to distort opinions, influence election results and undermine electoral institutions and infrastructure. Cyber threats and the manipulative influence of foreign governments and media on elections in the EU is becoming a destabilising factor for EU democracies.

The EU population is well aware of the magnitude of such challenges. A 2019 Eurobarometer survey showed that more than half of Europeans who use the internet say they have been exposed to or personally witnessed disinformation online. Nearly four out of ten Europeans have been exposed to content where they could not easily determine whether it was a political advertisement or not, and nearly six in ten Europeans are concerned about the possibility of 'elections being manipulated through cyberattacks'.

A 2019 study for the European Parliament showed how major disinformation campaigns have, in recent years, interfered with democratic processes, particularly elections and referenda. The deployment of hybrid threats by Russia, with massive disinformation campaigns and cybersecurity attacks, including more recently during the ongoing war in Ukraine, provides a live example of the potential detrimental impact of such actions on democracy.

To ensure that democratic debate and future elections take place under the highest democratic standards, the EU needs to build a healthier online environment. This would require measures to fill in existing policy gaps, including: safeguarding the integrity of elections in the EU; establishing an
adequate regulation and institutional oversight of how algorithms are used for political purposes; equipping citizens with skills and tools to fend off online disinformation and manipulation; increasing cyber resilience of electoral processes and infrastructures; and promoting healthy online environment standards worldwide.

Existing policy responses

EU action

In recent years, the EU has made active efforts to ensure a safer online environment. The EU approach builds on four axes: strengthening digital platforms’ self-regulation; imposing a set of mandatory rules on the biggest online actors to ensure a safer online environment; regulating online political advertising; and reinforcing EU capacities to tackle disinformation and cyber threats.

Strengthening self-regulation of online platforms. In 2018, the EU published an action plan against disinformation and adopted a Code of Practice on Disinformation asking online entities such as platforms, major social networks and advertisers to address the spread of disinformation. A wide range of companies, including Facebook, Google, Twitter, Microsoft and TikTok, have implemented the EU Code and committed, on a voluntary basis, to fight disinformation. In December 2021, the Commission presented its European democracy action plan to empower citizens and build more resilient democracies across the EU, to be gradually implemented until 2023 – a year ahead of the elections to the European Parliament. In this action plan, the Commission envisages revising the Code of Practice on Disinformation to introduce new measures, including reducing financial incentives for disinformation, empowering users to take an active role in preventing its spread, and cooperating better with fact-checkers across EU Member States. The revised Code is intended to serve as part of a co-regulatory framework with the Digital Services Act to help platforms mitigate risks stemming from disinformation.

Mandatory rules on online platforms. The Digital Services Act (DSA) proposal, tabled in December 2020, aims to create a safer and trusted online environment and set EU-wide rules to ensure transparency, accountability and institutional oversight of the EU online space. A set of new rules to be imposed on online platforms includes transparency obligations to mitigate the adverse effect of online advertising for citizens. Furthermore, it is proposed that very large online platforms (or VLOP) are subject to tighter obligations, given the particular impact they have on the economy and society and their potential responsibility regarding the dissemination of illegal content and societal harms. Such companies will be required to assess the systemic risks stemming from the functioning and use of their services, and especially the intentional manipulation of their services, for instance through the creation of fake accounts and the widespread dissemination of information having a negative effect (e.g. on electoral processes). The new set of rules constitutes a step towards more cooperative and regulatory mechanisms in line with the European democracy action plan. The DSA proposal is currently the subject of protracted negotiations by the co-legislators.

Regulation of on-line political advertising. The Commission adopted a Proposal for a Regulation on the transparency and targeting of political advertising in November 2021 as a follow-up to the European democracy action plan. This initiative covers both online and offline activities and complements the proposal for the DSA. The new rules would require any political advert to be clearly labelled as such and to include information such as who paid for it and how much. In addition, political targeting and amplification techniques would need to be explained publicly in detail and would be banned when using sensitive personal data without the explicit consent of the individual.

Reinforcing EU capacities to tackle cyber threats and disinformation in an international context. The 2016 EU framework on countering hybrid threats is being complemented by a number of initiatives to better protect democratic processes from manipulation by third countries or private interests. The EU’s East StratCom Task Force, created in 2015, has been reinforced since then to counter disinformation by the Russian Federation and its affiliates throughout Europe. In December
2020, the Commission and the High Representative of the Union for Foreign Affairs and Security Policy presented a new EU cybersecurity strategy aiming to bolster Europe’s collective resilience against cyber threats and ensure that all citizens and businesses can fully benefit from trustworthy and reliable services and digital tools. In this context, two legislative proposals – a Directive on measures for a high common level of cybersecurity across the Union (NIS 2) and a Directive on the resilience of critical entities – are being finalised. In addition, Cyber Rapid Response Teams and the European Digital Media Observatory have been set up to assist Member States in order to ensure a higher level of cyber resilience and to respond collectively to cyber incidents and disinformation.

The EU has also shown its ability to adopt extraordinary measures with its sanctions, recently adopted in a Council decision, to suspend the broadcasting activities of the main Russian state-controlled media outlets in the Union. However, more action is being advocated, while the efficacy of such measures in tackling disinformation on a larger scale has been questioned and recent research shows how disinformation about the ongoing conflict in Ukraine is being funded by online advertising. Furthermore, the new EU cybersecurity strategy was launched in 2020 to better address cybersecurity challenges in the EU and make physical and digital critical entities more resilient. Against this backdrop, in March 2022 the Council called for more action at EU level to ensure resilience of electronic communications infrastructure and networks in Europe, including more cooperation at operational level, the adoption of the forthcoming Cyber Resilience Act and the creation of a cybersecurity emergency response fund.

**Figure 46: Key measures to ensure a healthier online environment for healthy democracies**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-2020</td>
<td>Digital education action plan</td>
</tr>
<tr>
<td>November 2017</td>
<td>Proclamation of the Social Pillar</td>
</tr>
<tr>
<td>May 2016</td>
<td>General Data Protection Regulation</td>
</tr>
<tr>
<td>2019</td>
<td>Directive on transparent and predictable working conditions</td>
</tr>
<tr>
<td>2020</td>
<td>Upgraded European skills agenda</td>
</tr>
<tr>
<td>2019</td>
<td>Ethics guidelines for trustworthy AI</td>
</tr>
<tr>
<td>November 2021</td>
<td>Digital Europe work programme</td>
</tr>
<tr>
<td>2021-2027</td>
<td>Digital education action plan</td>
</tr>
<tr>
<td>April 2021</td>
<td>Proposal for a regulation laying down harmonized rules on artificial intelligence (artificial intelligence act)</td>
</tr>
<tr>
<td>December 2021</td>
<td>Proposals on individual learning accounts and micro-credentials</td>
</tr>
<tr>
<td>2022</td>
<td>European Commission negotiates digital single market act and digital markets act</td>
</tr>
<tr>
<td>2022</td>
<td>European Year of Youth (declared by the European Commission)</td>
</tr>
<tr>
<td>2022</td>
<td>Headline targets for 2030</td>
</tr>
</tbody>
</table>

Source: EPRS.

**Obstacles to implementation**

The development of digital environments has inevitably challenged legal frameworks that were devised to tackle pre-digital issues, e.g. traditional media, ‘paper’ advertising, TV-based electoral campaigning. The consolidation of a business model based on the accumulation and monetisation of data, along with insights from digital interactions and growing concern about the negative impact of this model on users and society, has put tremendous pressure on legislators to intervene.

However, uncertainty persists about the extent of the problem, the type of interventions that would be suitable and their broader implications, and the right balance between competing rights and interests (e.g. freedom of expression versus protection of democratic institutions). A key issue
is the limited access to data and the scarcity of systematic research (in particular outside the US context) on the impact of online platforms and algorithms on individuals' rights, social interactions and political institutions.

**Tackling online disinformation** has proved to be particularly difficult, requiring concerted efforts by online platforms, regulators, civil organisations, users, etc. The EU's self-regulatory approach to tackling disinformation – based on voluntary standards and commitments – has, as the Commission acknowledged, led to limited results. The process for revising the Code of Practice on Disinformation is quite slow and was not finalised in 2021 as expected.

Furthermore, there are continuing issues with efforts to protect the democratic process and to safeguard the integrity of elections. A key challenge is that the regulation of elections in the EU consists of a patchwork of EU and national rules, which makes it more difficult to adopt a coherent response to common challenges. Increased coordination at national level (e.g. through national elections networks of relevant competent authorities) and at EU level (e.g. via the [European cooperation network on elections](https://www.eucne.org) and the [Rapid Alert System](https://europa.eu/rapid/TRANSACTION-NOTICE_2020-00005)) has been helpful but more needs to be done to tackle foreign interference, cyber-attacks and electoral manipulation. Uncoordinated efforts by Member States to regulate political advertising may obstruct the exercise of fundamental freedoms, with a direct effect on the functioning of the internal market. The complexity of issues and the heterogeneity of rules also create enforcement challenges, as national competent authorities struggle to monitor, discover, and sanction transgressions of rules.

Another layer of complexity concerns the transnational and global nature of online environments, which may require regulators to carefully consider the global implications of proposed interventions and to engage with other legislators around the world.

**Policy proposals by experts and stakeholders**

Whereas many of the suggestions offered by experts and stakeholders have been taken up in recent EU actions and proposals (such as increasing the transparency and oversight of online platforms and better regulating online ads), there are several proposals that go beyond current discussions.

1. **Safeguarding the integrity of elections in the EU**

There are voices arguing for a tougher stance on targeted political advertising. According to the European Data Protection Supervisor (EDPS), data protection safeguards are also a prerequisite for fair and democratic elections. The authors of a 2019 study called on data protection authorities to step up their investigations into political microtargeting practices by advertisers, digital platforms and intermediaries. This could be part of a broader approach aiming to give users more power over their data collected online. In its 2022 Opinion on the Commission's proposal on political advertising, the EDPS recommended a full ban on microtargeting for political purposes. Such a ban has been supported by other stakeholders, such as the [European Partnership for Democracy](https://www.epfd.eu/).

Together with other transparency requirements, such as those included in the proposals on the DSA and on political ads, some argued that users should have access to a repository of political and public issue ads that they are targeted with. To minimise the impact of disinformation on European democracy, a 2021 study further recommends regulating political and issue-based advertising at EU level and granting the European Court of Auditors and the European Anti-Fraud Office (OLAF) powers to pursue the investigation of campaign finances, including sponsorship of social media advertisements. Another suggestion is to make contracts between political parties and platforms open for public scrutiny. These could be part of a 'universal advertising transparency by default' approach, which was advocated by a large group of NGOs.

Considering the negative effects of automated disinformation, some argued for a ban on the use of automated accounts (bots) to disseminate political and public issue ads. To increase cyber resilience, the European Union Agency for Cybersecurity (ENISA) recommended imposing a legal
obligation on political organisations to ensure a high level of cybersecurity in their systems, processes and infrastructure. It also suggested classifying election systems, processes and infrastructure as critical infrastructure, so that they become subject to stricter EU cybersecurity requirements.

2. Enhancing regulation and institutional oversight of algorithms used for political purposes

In recent years, there have been plenty of discussions about the kind and breadth of oversight mechanism needed to ensure a healthy online environment. A 2021 study suggested establishing an accountability framework (beyond the DSA proposal) that would include a new authority for online content platforms to supervise the process and organise relations with the various stakeholders, including the community of vetted researchers and relevant NGOs. Other proposals advocating for a specific institutional oversight mechanism include establishing a new EU agency for countering disinformation to better coordinate the EU’s counter-disinformation initiative, and creating a new regulatory body for political advertising.

3. Support citizens, civil society, and research

Another set of suggestions focus on empowering citizens and promoting tools to identify and mitigate online risks. Measures in this category include awareness-raising, improving media literacy, and supporting investigative journalism and fact-checking services. An important element in this strategy is also enabling researchers more broadly to access data to research on the impact of the online environment and automated tools on democracy. Another suggestion is to increase diversity of exposure to online information by promoting a diversity by design principle, where users are encouraged to explore different kinds of information to those they usually prefer. A further suggestion is to create a common European high-quality media service transmitted by contemporary technology, with a view to enhancing EU cohesion and offering a common European perspective. The Commission launched an expert group on disinformation and digital literacy to assist it in preparing common guidelines, to be published in Autumn 2022, for teachers and educators to tackle disinformation and promote digital literacy through education and training.

4. Promote EU standards worldwide

The question of how to address the challenges to democracy in an online environment is widely discussed around the globe, and the EU could help steer a common approach at international level. In this respect, a 2020 study from the Council of Europe recommends considering the establishment of an informal intergovernmental taskforce to facilitate the regular exchange of ideas, practices and legislative and regulatory measures on the influence of foreign media on national elections. Such a taskforce could also work on a common code on political advertising to be applied to licensed services. Achieving harmonisation of standards in this area beyond the EU could contribute to the cooperation between regulators and also help to combat problems of foreign interference. A 2019 study argues for enhanced transnational cooperation with a view to establishing a coherent global framework to regulate disinformation (including at G7 and OECD level). The intensification of the US-EU dialogue on technology governance could also lead to a global oversight framework, based on various public bodies and on a multi-stakeholder approach.

Beyond intergovernmental level, a 2021 European Parliament analysis suggested that the EU support the creation of a new ‘Transparency International for Disinformation’, a dedicated civil society organisation to independently monitor and provide comparable data about disinformation campaigns from target countries.

Position of the European Parliament

Parliament has long supported EU initiatives to regulate digital platforms and political advertising and reinforce EU capacities to tackle disinformation and cyber threats. In its 2018 resolution on the use of Facebook users’ data by Cambridge Analytica, Parliament called for a range of measures,
including adapting the electoral rules on online campaigning (i.e. those pertaining to transparency on funding, election silence periods, the role of the media, and disinformation) and to monitor the transparency features in relation to political advertising introduced by the online platforms.

In its 2019 resolution on foreign electoral interference and disinformation, Parliament called on the EU to create a legal framework for counter-hybrid threats, classify equipment used for elections as critical infrastructure and turn the East StratCom Task Force into a permanent structure with more funding.

In the context of the ongoing DSA negotiations, Parliament asked for more transparency over algorithms to fight harmful content and disinformation and for more transparent and informed choices for the recipients of targeted advertising. Also, on 9 March 2022 Parliament's Special Committee on Foreign Interference in Democratic Processes adopted its final report on malicious foreign interference, asking the Commission to propose a more coordinated European strategy to counter operations by foreign governments that use disinformation. Parliament recommends the creation of a European centre to tackle interference threats, as well as stronger measures to address disinformation on online platforms such as forcing social media platforms to stop boosting inauthentic accounts that drive the spread of harmful foreign interference. Furthermore, Parliament called for the introduction of new measures to ensure cybersecurity and resilience against cyber-attacks, deterrence and countermeasures, and for the protection of critical infrastructure and strategic sectors.

### In focus: reinforcing internet capacity and security

To avoid the capacity crunch and keep ahead of the growth in internet traffic, the EU's strategy is primarily directed at boosting investment in high-capacity broadband infrastructure. To that end, in 2021 the EU set connectivity targets in its Digital Decade strategy and adopted a range of new funding instruments including CEF Digital, which is designed to support the roll out of 5G networks throughout the EU. The Commission is also putting forward an ambitious plan for a space-based secure communication system and satellite traffic management to ensure secure and resilient connectivity across Europe in the years to come.

Furthermore, in 2020 the EU adopted the new EU cybersecurity strategy to better tackle cybersecurity threats that are at the core of internet outage and to safeguard a global and open internet. The amendment of the NIS Directive that is being finalised will impose new cybersecurity requirements on essential entities, including providers of internet services such as the Domain Name System (DNS).

In addition, the EU wants to lead discussions at international level to shape the development of the internet as a space of civic responsibility. The European Commission actively engages in multilateral discussions to shape a resilient, secure and robust internet and promote democracy and human rights. The European Global Gateway initiative launched in December 2021 aims, inter alia, to boost smart, clean and secure digital links around the world. Accordingly, the EU intends to work with partner countries to invest and deploy digital networks and infrastructure (such as submarine and terrestrial fibre-optic cables, space-based secure communication systems and cloud and data infrastructure) to plug vulnerabilities and provide trusted internet connectivity around the globe.
Figure 47: Pyramid of instruments at the disposal of the EU and its Member States

### Possible action

<table>
<thead>
<tr>
<th>EP requests</th>
<th>Objective/ instrument</th>
<th>Likely lead actors</th>
<th>What could be done?</th>
<th>References (sources of ideas)</th>
<th>Degree of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strengthen the Digital Services Act proposal</td>
<td>Commission/ European Parliament/ Council</td>
<td>Strengthen the provisions on targeted advertising Provide more transparent and informed choices for the recipients of digital services, including information on how their data will be monetised</td>
<td>EP report on Digital Services Act</td>
<td></td>
</tr>
</tbody>
</table>
### Proposals submitted by the European Commission/ongoing processes

<table>
<thead>
<tr>
<th>No.</th>
<th>Proposal Title</th>
<th>Referrer</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Digital Services Act</td>
<td>Commission/ European Parliament/ Council</td>
<td>Provides a set of new EU-wide rules to ensure transparency, accountability and institutional oversight of the EU online space</td>
<td>COM(2020) 825</td>
</tr>
<tr>
<td>4</td>
<td>Proposal on the transparency and targeting of political advertising</td>
<td>Commission/ European Parliament/ Council</td>
<td>Lays down harmonised rules for a high level of transparency of political advertising and related services (offline and online)</td>
<td>COM(2021) 731</td>
</tr>
<tr>
<td>5</td>
<td>Proposal on measures for a high common level of cybersecurity across the EU (NIS 2)</td>
<td>Commission/ European Parliament/ Council</td>
<td>Improve further the resilience and incident response capacities of public and private entities, competent authorities and the Union in the field of cybersecurity and critical infrastructure protection</td>
<td>COM(2020) 823</td>
</tr>
<tr>
<td>6</td>
<td>Proposal for a Directive on the resilience of critical entities</td>
<td>Commission/ European Parliament/ Council</td>
<td>Reduce vulnerabilities, including for the critical infrastructures that are essential for the functioning of EU societies and economy</td>
<td>COM(2020) 829</td>
</tr>
</tbody>
</table>

### Policy suggestions from think tanks and academia/policy examples from third countries

<table>
<thead>
<tr>
<th>No.</th>
<th>Policy Suggestion</th>
<th>Referrer</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Full ban on microtargeting for political purposes</td>
<td>Commission/ European Parliament/ Council</td>
<td>Amend the proposal on political advertising to prohibit the use of microtargeting for political purposes</td>
<td>EDPS Opinion on the proposal for a Regulation on political advertising (2022); reaction of the European Partnership for Democracy (2021)</td>
</tr>
<tr>
<td>8</td>
<td>Universal advertising transparency by default</td>
<td>Commission/ European Parliament/ Council</td>
<td>Amend the proposal on political advertising to increase transparency of political advertising</td>
<td>Statement of civil society coalition (2020)</td>
</tr>
<tr>
<td>9</td>
<td>Ban the use of bots for political advertising</td>
<td>Commission/ European Parliament/ Council</td>
<td>Amend the proposal on political advertising</td>
<td>EP study on disinformation and propaganda (2019)</td>
</tr>
<tr>
<td>10</td>
<td>Enhance the cyber resilience of political organisations and electoral systems</td>
<td>European Parliament/ Council/ Commission</td>
<td>Oblige political organisations to deploy a high level of cybersecurity; classify election systems, processes and infrastructure as critical infrastructure</td>
<td>ENISA paper on election cyber security (2019)</td>
</tr>
<tr>
<td>11</td>
<td>Establish new/additional oversight mechanisms and institutions</td>
<td>Commission/ European Parliament/ Council</td>
<td>Establish a new regulatory body for political advertising; Establish an authority for online content platforms</td>
<td>EPRS study on automated tackling of disinformation (2019)</td>
</tr>
<tr>
<td>No.</td>
<td>Key Area</td>
<td>Stakeholders</td>
<td>Action</td>
<td>Reference</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>Stepping up data protection investigations</td>
<td>Member States/Data protection authorities</td>
<td>Make full use of data protection powers under GDPR to investigate abusive data practices by advertisers, digital platforms, and intermediaries</td>
<td>EP study on disinformation and propaganda (2019)</td>
</tr>
</tbody>
</table>
| 13  | Support citizens, media, researchers, and civil society                  | Commission/European Parliament/Council/Member States                          | Improve media literacy  
Support independent media, support fact-checking organisations  
Promote content diversity by design; provide broader access to data for researchers  
Support the creation of a 'Transparency International for Disinformation' | EPRS study on automated tackling of disinformation (2019)  
EP study on disinformation and propaganda (2019)  
Algorithm Watch report (2020)  
EP analysis on the misuse of social media (2021) |
| 14  | Boost international cooperation on regulating online ecosystems, fighting disinformation and foreign interference | Commission/European Parliament/Council/Member States                          | Establish an intergovernmental taskforce on foreign influence  
Create a global framework on disinformation                                                                                   | CoE study on regulating political advertising (2020)  
EPRS study on automated tackling of disinformation (2019) |
Safeguarding EU and global food security

The issue in short: The challenge and the existing gaps

Over the past eight years, hunger and malnutrition have been rising steadily, reversing several decades of progress. According to the UN Food and Agriculture Organization (FAO), between 720 and 811 million people in the world faced chronic hunger in 2020, the highest level since 2014. Climate change and the Covid-19 pandemic have further exposed the challenges of the global food system to feed an increasing population in a sustainable manner.

Russia’s military aggression against Ukraine has raised a widespread international concern of a global food crisis similar, or worse, to the one the world faced in 2007-2008. Russia and Ukraine are key agricultural players which, combined, export nearly 12% of the food calories traded globally, and are major providers of basic agro-commodities, including wheat, maize and sunflower oil. Russia is also the world’s largest exporter of fertilisers (see table 1). Several regions are highly dependent on imports from these two countries to ensure their basic food supply: Russia and Ukraine, combined, supply over 50% of the cereal imports in North Africa and the Middle East, while eastern African countries import 72% of their cereals from Russia and 18% form Ukraine.

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Ukraine</th>
<th>Russia</th>
<th>Russia and Ukraine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>10 %</td>
<td>24 %</td>
<td>34 %</td>
</tr>
<tr>
<td>Maize</td>
<td>15 %</td>
<td>2%</td>
<td>17 %</td>
</tr>
<tr>
<td>Barley</td>
<td>13 %</td>
<td>14 %</td>
<td>27 %</td>
</tr>
<tr>
<td>Sunflower oil</td>
<td>31 %</td>
<td>24 %</td>
<td>55 %</td>
</tr>
<tr>
<td>Sunflower cake</td>
<td>61 %</td>
<td>20 %</td>
<td>81 %</td>
</tr>
<tr>
<td>Vegetable oils</td>
<td>_</td>
<td>_</td>
<td>10 %</td>
</tr>
<tr>
<td>White fish (Alaska Pollock)</td>
<td>_</td>
<td>16 %</td>
<td>_</td>
</tr>
<tr>
<td>Fertilizer mineral intermediates (ammonia, phosphate rock, sulphur)</td>
<td>_</td>
<td>13%</td>
<td>_</td>
</tr>
<tr>
<td>Finished fertilisers</td>
<td></td>
<td>16 %</td>
<td></td>
</tr>
<tr>
<td>Food calories traded globally</td>
<td>6 %</td>
<td>5.8 %</td>
<td>11.8 %</td>
</tr>
</tbody>
</table>

Compilation by author, source: UN FAO (March and April): AMIS Market monitor
1. Impact on global food supply: factors and state of play

Global food supply will be negatively affected by three concomitant factors arising from the military aggression, namely:

- A significant reduction (or total halt) of exports and production of essential commodities from the countries at war;
- A global spike in prices of food supplies and inputs needed for agri-food production (fertilisers and energy);
- International responses to the above factors, which can either amplify the effects of the crisis (mainly by uncoordinated protectionist or speculative measures) or mitigate it (applying lessons learnt from the 2007-2008 food crisis).

The level of the war's impact on global food supply, and the severity of the subsequent food crisis, will largely depend on the duration of the conflict itself and of the evolution of each of the factors mentioned above. Depending on all these variables, and of the measures taken to mitigate the impact of the crisis, different scenarios can be envisaged.

The situation, which is very fluid and evolving rapidly, can be summarised as follows at the moment of writing:

- Disruption of exports and production capabilities in Ukraine and Russia

The UN Food and Agriculture Organization so far expects that between 20% and 30% of Ukrainian land usually destined for cereals, maize and sunflower seeds will not produce crops for next year's harvest. The Ukrainian Prime Minister confirmed that Ukraine's 2022 grain harvest is expected to be 20% less than last year. In March, Ukraine banned exports of a number of food products (rye, barley, buckwheat, millet, sugar, salt and meat) until the end of 2022.

In the case of Russia, although no major disruption to crops already in the ground appears imminent, uncertainty exists over the impact on exports. In the short-term, disruption of shipments of 10% up to 30% is expected, mainly due to the closure of the Azov Sea to commercial vessels. Black Sea ports are open for the moment, from where most cereals are shipped, although its designation as a 'high risk' area for shipping has pushed up insurance premiums in that industry. Russia started curbing exports of cereals as early as December 2021. In mid-March, Russia suspended its exports of wheat, maize and other cereals to Armenia, Kazakhstan and Kyrgyzstan. Although EU sanctions imposed on Russia and Belarus do not target agricultural commodities, they do affect fertiliser trade from Belarus (potash), and could be followed by counter-sanctions from Russia and Belarus, as happened in 2014. Russia has already banned ammonium nitrate exports and has threatened to impose further fertiliser exports bans to 'non friendly' countries.

Overall, the European Commission estimates that up to 25 million tonnes of wheat would need to be substituted in order to meet worldwide food needs in the current and next seasons.

- Food commodities and fertiliser inflation levels

The FAO Food Price Index, tracking monthly changes in international commodity prices, indicates an increasingly difficult situation: it averaged 140.7 points in February 2022, its highest point ever, and 3.1 points above the previous peak of February 2011. In the EU, food prices have increased 5.6% compared to February 2021. Currently, sunflower oil and wheat are being traded at near-record highs. While sunflower-seed oil is highly substitutable with other vegetable oils, wheat is not. Wheat is a staple food for over 35 per-cent of the world's population, and the lack of substitutability and dietary diversity will likely compound the pressure on wheat prices. Concerning fertiliser, prices were already on the rise before the war, reaching levels unseen since the global financial crisis, mostly due to higher gas prices. The FAO forecasts that the global reference price of fertiliser would undergo an additional 13 per-cent increase in 2022/23, relative to its already elevated baseline level, in response to the more expensive production inputs implied by the higher crude oil price, but also
by higher crop prices. This increase would influence production costs for the 2022/23 growing seasons.

- Individual country measures in international markets

A number of countries, other than Russia and Ukraine, have already imposed or have announced their intention to impose some degree of control over the export of essential agricultural commodities. Egypt (the first importer of Ukrainian and Russian wheat), Argentina, Indonesia, Moldova, Serbia and Turkey are imposing export bans on staple crops, and more countries may follow. In the EU, on 4 March, Hungary announced export controls over wheat, rye, barley, oats, maize, soybeans and sunflowers, requiring preliminary registration of intended exports and giving the government a purchase priority for these goods until 15 May 2022. China has imposed export restrictions on phosphate fertiliser until June 2022.

Lessons learnt from the 2007-2008 food crisis indicate that protectionist trade restrictions were a significant driver in the near doubling of wheat prices at the time, since they caused further market distortions and exacerbated the crisis. G7 leaders stated on 24 March 2022 their determination to ‘avoid export bans and other trade-restrictive measures, maintain open and transparent markets, and call on others to do likewise, consistent with World Trade Organization (WTO) rules, including WTO notification requirements’.

2. Expected impact on EU food security

While food availability, at the moment, is not at stake in the EU, food affordability for low-income households might be at risk. Furthermore, EU agricultural production will be impacted by the EU’s strategic dependences on a number of key inputs.

The bloc is largely self-sufficient for key agricultural products, such as wheat and barley (net exporter), and maize and sugar (largely self-sufficient). The EU is also self-sufficient for a number of animal products, both dairy and meat products, fruits and vegetables. However, the EU is a considerable net importer of specific products which may be difficult to substitute in the short term, such as sunflower oil and seafood. Moreover, the crisis has exposed the dependency of the EU on a number of key imported inputs: energy, animal feed and feed additives, as well as on agricultural fertilisers.

The EU vulnerability to market distortions in fertiliser trade (both in terms of prices and export restrictions) might be particularly acute, since fertilisers represent 18 % of the input costs for arable crops. For potassic fertilisers, the EU relies on Belarus and Russia for 59 % of its imports, while for nitrogen fertilisers (for which natural gas price is the main determinant), 31 % of EU imports come from Russia.

In terms of food affordability, inflationary tensions will disproportionately affect low-income households, including refugees, putting them at further risk of food insecurity. According to the FAO, a total of 6.9 million people in the EU were exposed to severe food insecurity over the 2016-2018 period, based on the food insecurity experience scale (FIES). The pandemic highlighted the vulnerability of groups of EU citizens, with food banks experiencing a sharp increase in demand. It also revealed the dependence of low-income households on social assistance programmes, such as subsidised school lunches, to cover their nutrition needs. In 2020, 8.6 % of the overall EU population were unable to afford a meal with meat, fish or a vegetarian equivalent every second day.

3. Expected impact on global food security

The current Russian war of aggression on Ukraine risks raising by 7.6 to 13.1 million the number of undernourished people in 2022-2023, the FAO estimates. Jordan, Yemen, Israel and Lebanon are among the most concerned countries, as they rely heavily on basic commodities imports, of which Russia and Ukraine have strong shares. African countries will have difficulties to face market disruptions and the rise in prices. Higher prices and shortages also seriously affect food assistance.
to fragile countries. In Ukraine itself, the UN World Food Programme (WFP) estimates that ‘45 per cent of the population are worried about finding enough to eat’.

Existing policy responses

EU action

**Figure 48: Safeguarding EU and global food security in times of crisis**

Food security, defined as the access to sufficient, safe and nutritious food for all has been one of the core objectives of the EU’s common agricultural policy (CAP) since its entry into force in 1962, as enshrined in the Treaties (Article 39 of the Treaty on the Functioning of the European Union TFEU). The CAP provides income support, market measures and rural development measures to safeguard farmers and increase agricultural productivity, while protecting rural landscapes and the environment. Over 60 years, and over successive CAP reforms, the EU has been developing its capacity to ensure a high degree of food security and self-sufficiency, now scoring as one of the most food-secure regions in the world, and evolving from a net food importer to becoming the world’s first exporter of agri-food products. The latest reform of the CAP, formally adopted on 2 December 2021 after three years of negotiations, will enter into force in January 2023 and will cover CAP interventions until 2027. The reform introduces a new delivery model, moving from compliance towards results and performance, with a new distribution of responsibilities between the EU and the Member States, and with renewed emphasis on environmental performance and sustainability. By January 2022 Member States had to present to the Commission their national strategic plans, i.e. how they intend to use, manage and monitor CAP instruments and tools to achieve the ambitious CAP objectives.

The common fisheries policy (CFP) was launched in 1983, as a structural policy to regulate the market for fisheries products and access to fishing waters, and to modernise EU fishing fleets. It
subsequently added the objectives of conservation and management of the fisheries resources in EU waters and in the wider context of international fisheries agreements.

While the CAP and CFP regulate primary production, the first stage in ensuring availability of food supply, other policies and instruments have contributed to enhance other dimensions of the EU food security. The General Food Law Regulation, revamped in 2019, lays down general principles, requirements and procedures related to EU decision-making in food and feed safety, and establishes the European Food Safety Authority (EFSA) as an independent scientific advisory and monitoring body. The Fund for European Aid to the Most Deprived (FEAD) supports EU countries’ actions to provide food and basic material assistance to the most deprived. On 20 May 2020, the Commission unveiled its ‘A farm to fork strategy for a fair, healthy and environmentally friendly food system’, with the ultimate objective of making the EU food system a global model of sustainability at all stages of the value chain, and setting ambitious sustainability targets to be reached by 2030: reducing the use and risk of pesticides by 50%, reducing the use of fertilisers by at least 20%, reducing sales of antimicrobials used for farmed animals and aquaculture by 50%, and achieving a proportion of 25% of agricultural land under organic farming.

In 2020, the coronavirus crisis sent shockwaves through food supply chains, affecting the EU too. The EU food system proved resilient, supported by a host of sectoral, national and EU policy measures. However, the disruptions shone a spotlight on some structural weaknesses in the EU’s food supply chain, as well as to affordability of safe and healthy food in the EU itself. Consequently, food security in the EU was put at the top of the agenda, and in November 2021 the Commission presented its communication on ‘a contingency plan for ensuring food supply and food security in times of crisis’, one of the actions envisaged in the ‘farm to fork strategy’ (see box below). Along the same lines, the French Council Presidency (January - June 2022) has highlighted sovereignty and food self-sufficiency as one of the main objectives of its programme in the agricultural sector.

### EU contingency plan for food supply and food security and the European Food security Crisis preparedness and Response Mechanism

Key to improving EU preparedness, this contingency plan embraces a collaborative approach between all public and private parties being part of the food supply chain. From the private sector, this includes farmers, fishermen, aquaculture producers, food processors, traders and retailers as well as transport and logistics sectors for instance. EU, national and regional authorities will also be central to this plan.

The plan itself will be rolled out by the European Food Security Crisis preparedness and response Mechanism (EFSCM), a permanent platform coordinated by the Commission, which includes Member States public authorities and relies on a dedicated group of experts (the EFSCM expert group). The EFSCM, which combines Member States’ and some non-EU countries’ representatives and actors from all stages of the food chain, met for the first time on 9 March 2020, and held a subsequent meeting on 23 March 2020. The group will meet periodically, and in the event of a crisis, at very short notice and as frequently as necessary.

It will focus on specific activities and a set of actions to be completed between mid-2022 and 2024:

- mapping of vulnerabilities and critical infrastructure of the food supply chain, including structural issues;
- foresight, risk assessment and monitoring: improve preparedness by making use of available data (including on weather, climate, markets);
- coordination, cooperation and communication: sharing information, best practices, national contingency plans; development of recommendations to address crises; coordination and cooperation with the international community.
The 24 February 2022 invasion of Ukraine by Russia has put, even more so, food security at the top of the EU political agenda. The 10-11 March Versailles declaration agreed by the EU leaders urged the Commission to present options to address the rising food and input prices and enhance global food security in the light of Russia’s war. The Commission swiftly presented a package of measures embedded in the 23 March communication on 'Safeguarding food security & reinforcing the resilience of food systems', including short-term and medium-term proposals to enhance food security in the EU and in third countries, including in Ukraine itself. The main actions at EU and Member State level (detailed in the boxes below) can be undertaken using existing instruments, without additional legislative changes. In parallel, the Commission announced the postponement of two highly anticipated Green Deal legislative proposals – on the sustainable use of pesticides and nature restoration targets in the EU – and put forward a package of crisis measures to support the EU fishery and aquaculture sectors in the context of Russia's invasion of Ukraine.

The package of measures announced by the Commission on 23 March were promptly supported by the European Council at its meeting on 24-25 March 2022, as well as subsequently by the Agriculture and Fisheries Council, and they have been met with broad support from a large number of stakeholders and civil society organisations, with the notable exception of most environmental NGOs. The main subject of discussion is whether pursuing immediate food productivity gains should imply sacrificing the EU's sustainability ambitions laid down in the Green Deal and Farm to Fork. The position of the Commission is that sustainability and food security are inextricably linked and therefore can, and should, be pursued at the same time.

National level initiatives

In the 2023-2027 CAP, Member States are in the driving seat for the design and implementation of their CAP National Strategic Plans (NSP) agreed upon with the Commission. In its 23 March communication, the Commission already announced a higher degree of flexibility in revising the NSP with a view to adapt them better to arising needs, and encouraged Member States to use it to enhance overall resilience of food systems (see box below).

<table>
<thead>
<tr>
<th>Communication on 'Safeguarding food security &amp; reinforcing the resilience of food systems'</th>
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</thead>
<tbody>
<tr>
<td><strong>Main measures - EU level</strong></td>
</tr>
<tr>
<td>➢ a €500 million support package, including mobilisation of CAP reserve funds, for EU farmers most affected by the crisis, which can be topped up to €1.5 billion through Member States’ national envelopes</td>
</tr>
<tr>
<td>➢ market safety net measures to support specific markets (i.e. pigmeat sector) and increased levels of advances of direct payments later this year</td>
</tr>
<tr>
<td>➢ new self-standing Temporary Crisis Framework (TCF) for State aid</td>
</tr>
<tr>
<td>➢ possibility for Member States to derogate from certain greening obligations in 2022 to bring additional agricultural land into production (i.e. use of fallow land under the Ecological Focus Areas (EFAs)).</td>
</tr>
<tr>
<td>➢ preservation of the EU single market, avoiding export restrictions and bans</td>
</tr>
<tr>
<td>➢ support through the Fund for European Aid to the Most Deprived (FEAD) for EU countries’ actions to provide food and/or basic material assistance to the most deprived.</td>
</tr>
<tr>
<td>➢ possibility for Member States to apply reduced rates of value added tax and encourage economic operators to contain retail prices</td>
</tr>
</tbody>
</table>
At the global level too, the EU is committed to ensuring access to affordable, safe, sufficient and nutritious food for all. This is enshrined in the EU policy framework to help developing countries address food security challenges (2010) and in the new European Consensus on Development (2017). Maternal and child nutrition are at the heart of a 2013 policy framework and of the 2014 EU action plan on nutrition – reducing the number of stunted children under five by 7 million by 2025. Council conclusions of 31 May 2021 reiterated the EU priorities on food security:

- strengthening sustainability and resilience;
- promoting healthy diets through sustainable food systems;
- strengthening food safety and public health;
- contributing to the sustainability and resilience of food systems through trade;
- introducing new finance solutions and business models;
- improving scientific knowledge and ensuring a strong science-policy interface.

For the 2021–2024 period, the EU has pledged over €2.5 billion for international cooperation related to nutrition. This includes providing direct food aid in crisis situations, together with supporting third countries in preventing and managing food crises, linking up humanitarian aid, development cooperation, and conflict management when appropriate. The EU toolbox to harness the fight against malnutrition in third countries includes the provision of nutritious products and treatment, and support to national nutrition programmes. In streamlining humanitarian aid and development programming, the EU ensures the main causes of under- or malnutrition are tackled in the longer term, notably for children and pregnant or lactating women, through better access to water, sanitation and healthcare facilities – a crucial challenge during the coronavirus pandemic. To improve resilience to food crises, the EU focuses on promoting diets adapted to the local circumstances and on supporting smallholder farmers, who run 80 % of the farms and 30-40 % of the land on average in low- and lower-middle-income countries. The EU promotes sustainable agricultural practices to make better profits from work on the land, while safeguarding resources and biodiversity. EU trade policies and negotiated trade agreements must take into account food security objectives, and the EU assesses their impact in this regard.

Main measures - Member State level

The Commission encourages Member States to:

1. Use the new CAP strategic plans to prioritise investments that reduce dependency on gas and fuel and inputs such as pesticides and fertilisers, through:

   - Investments in sustainable biogas production, reducing dependency on Russian gas.
   - Investments in precision farming, reducing dependency on synthetic and mineral fertilisers as well as chemical pesticides.
   - Support for carbon farming, reducing greenhouse gas emissions and providing a better income for farmers.
   - Support for agro-ecological practices, reducing dependency on chemical inputs and ensuring lasting food security.

2. Ensure the effectiveness and coverage of social protection systems and access to essential services for those in need.
Development cooperation and humanitarian aid are shared competences between the EU institutions and Member States, which seek coherence between their respective policies in these matters. In the framework of the external investment plan (EIP), the European Fund for Sustainable Development (EFSD, now EFSD+) notably addresses the lack of financing mechanisms for smallholders, the main assets for food security. Joint programming with partner countries also includes food security and nutrition strategies, for example in Senegal, Laos and Nepal. A partnership to boost the African production of plant-based proteins was announced at the February 2022 EU-African Union summit. It will be supported, along with other EU and Member States’ initiatives, by the Global Gateway investment package on sustainable food systems.

EU support to food crisis preparedness and adaptation support includes initiatives such as DeSIRA (Development Smart Innovation through Research in Agriculture) and monitoring tools to identify risk and foster innovation. Research is often done in partnership with international partners, such as organisations and research centres in the Food Security Information Network (FSIN), funded by the EU and the United States Agency for International Development, and the Global Network Against Food Crises (GNFC), launched in 2016 by the EU, the FAO and the World Food Programme (WFP). The EU also supports CGIAR, an international research network in sustainable food systems and the fight against hunger, notably with a €140 million commitment announced on 25 September 2021.

The EU is committed to transforming global food systems and to promoting its Farm to fork strategy. To this aim, the Commission announced its participation in eight global coalitions on food security and nutrition, which gather together a variety of stakeholders.2

The above-mentioned communication on Safeguarding food security and reinforcing the resilience of food systems commits to supporting Ukraine’s short- and medium-term food security strategy. In addition, the Food and Agriculture Resilience Mission (FARM) was launched on 24 March 2022 by the French Presidency of the Council in coordination with G7 countries and the African Union. FARM will aim at monitoring trade on agricultural markets, support Ukraine’s and the most affected countries’ agricultural capacity, and address the impact of expected drops in production levels on the most fragile countries. In an annex to a joint statement by President von der Leyen and President Biden (24 March 2022), the EU and United States made pledges to address food security and nutrition issues. On top of the €2.5 billion pledge for global food security and nutrition, the proposed €330 million EU Emergency Support Programme for Ukraine will aim to secure Ukraine’s access to basic goods and services, and to support its agricultural sector. The Commission, in conjunction with FAO, is supporting Ukraine to develop and implement a short-term and medium-term food security strategy (inputs for farmers, maintenance of transportation and storage facilities).

Position of the European Parliament

In numerous resolutions, the European Parliament has expressed its concern about tackling food insecurity in third countries, notably in the framework of its cooperation with Africa. This in particular implies supporting the provision of basic services, including food security, with the involvement of local communities.

In its resolution on the farm to fork strategy, Parliament highlighted the need for food systems able to provide enough affordable and safe food for all, and stressed that ‘rapid population growth, climate change, the scarcity of natural resources and changing consumption patterns’ further challenge the achievement of the ‘Zero hunger’ sustainable development goal (SDG 2). In its opinion report for the resolution, Parliament’s Committee on Development (DEVE) called for comprehensive implementation of the farm to fork strategy, taking into account the needs of the most deprived, notably in conflict-affected areas.

On 24 March 2022, the European Parliament adopted a resolution calling for an ‘urgent EU action plan to ensure food security inside and outside the EU in light of the Russian invasion of Ukraine’. A large number of EP proposals to support EU farmers and consumers are reflected in the 23 March
communication on safeguarding food security. The EP has called on the Commission to consider additional measures, such as extending the extraordinary rural development Covid-19 measures to address farmers' liquidity problems, a proposal that has been supported by 12 EU Member States in the Council. The EP emphasises that European strategic autonomy in food, feed and the agricultural sector overall must be reinforced, in line with the Green Deal objectives. It notes, however, that the objectives set out in the Farm to Fork and Biodiversity strategies must be analysed on the basis of a comprehensive impact assessment on EU food security and the situation in neighbouring countries, maintaining as first priority that no food shortages arise. The EP also calls for the setting up of safe food corridors to and from Ukraine to deliver aid and goods, as well as for direct and urgent support to Ukraine with seeds, fuel, fertilisers to maintain its agricultural production.

**Figure 49: Pyramid of instruments at the disposal of the EU and its Member States**

<table>
<thead>
<tr>
<th>Possible action</th>
<th>Objective / instrument</th>
<th>Likely lead actors</th>
<th>What could be done?</th>
<th>References (sources of ideas)</th>
<th>Degree of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP requests</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Safe food corridors with Ukraine</td>
<td>European Commission / Member States</td>
<td>Enabling safe transport and food corridors from and to Ukraine via alternative ports, railway and road transport</td>
<td>EP resolution</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Exceptional temporary support under rural development fund (EAFRD)</td>
<td>European Commission / Member States</td>
<td>Enable Member States to make use of available funds under their existing rural development programmes measures under the European Agricultural Fund for Rural Development (EAFRD) for the years 2021-2022, to support farmers and SMEs particularly affected by the crisis, following a similar mechanism to the extraordinary rural</td>
<td>EP resolution</td>
<td>Council request (by 12 Member States)</td>
</tr>
</tbody>
</table>
### Proposals submitted by the European Commission / on-going processes

<table>
<thead>
<tr>
<th>No.</th>
<th>Proposal Description</th>
<th>Implementing Bodies</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Halving EU-wide food waste by 2030</td>
<td>EU institutions / Member States</td>
<td>In its resolution on the European Green Deal (Jan 2020), the EP called for enforceable EU-wide food waste reduction, in accordance with SDG commitments. Under the farm to fork strategy a proposal will be put forward in 2023 for a legally binding target of reduction. EP resolution.</td>
</tr>
<tr>
<td>4</td>
<td>Package of measures for safeguarding food security and reinforcing the resilience of food systems</td>
<td>European Commission / Member States</td>
<td>Package of short-term and medium-term proposals, including support to EU farmers most affected (CAP reserve funds), market safety net measures, temporary derogation from state aid rules and from certain greening obligations in 2022. Commission communication.</td>
</tr>
<tr>
<td>5</td>
<td>EU food security contingency plan and crisis response mechanism</td>
<td>European Commission / Member States</td>
<td>A permanent European Food Security Crisis preparedness and response Mechanism (EFSCM), coordinated by the Commission and relying on a dedicated group of experts - including Member States public authorities. Within the EFSCM it will be undertaken a mapping of EU food supply chain risks and vulnerabilities, and recommendations to address / mitigate them. Commission communication.</td>
</tr>
<tr>
<td>6</td>
<td>EU Support Programme for Ukraine</td>
<td>European Commission / Member States</td>
<td>EU Emergency Support Programme of €330 million for Ukraine, both through its civil protection and humanitarian assistance mechanisms. Commission.</td>
</tr>
<tr>
<td>7</td>
<td>EU support Ukraine's food security strategy</td>
<td>European Commission / FAO</td>
<td>The Commission, in conjunction with FAO, is supporting Ukraine to develop and implement a short-term and medium-term food security strategy (inputs for farmers, maintenance of transportation and storage facilities) The Parliament has requested to accelerate urgent provision of seeds, fuel, fertilisers to support Ukrainian farmers. EU farming organisations have mobilised support. Commission communication.</td>
</tr>
<tr>
<td>8</td>
<td>EU legislative framework for a sustainable food system</td>
<td>EU institutions</td>
<td>The farm to fork strategy announces a legislative framework for a sustainable food system by 2023. Farm to fork strategy.</td>
</tr>
<tr>
<td>9</td>
<td>Member States CAP National Strategic Plans (NSP)</td>
<td>Member States / European Commission</td>
<td>Member States may use in their CAP strategic planning to increase their environmental ambition, including agricultural practices eligible under the eco-schemes, to reward farmers for climate services. Recommendations to Member States Eco-schemes.</td>
</tr>
<tr>
<td>10</td>
<td>The European Social Fund +</td>
<td>European Commission / Member States</td>
<td>The ESF+ (€68 billion for 2021-2027) is the main vehicle, at EU level, to promote social inclusion, fight poverty and provide food and basic material assistance to the most deprived (integrating the current Fund for European Aid to the Most Deprived – FEAD). Part of the MFF 2021-2027 -NGEU.</td>
</tr>
<tr>
<td>Page</td>
<td>11</td>
<td>Action plan on organic farming</td>
<td>European Commission</td>
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<tr>
<td>12</td>
<td></td>
<td>EU carbon farming initiative</td>
<td>European Commission</td>
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<tr>
<td>13</td>
<td></td>
<td>EU policy framework- food security in developing countries</td>
<td>European Commission</td>
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<tr>
<td>14</td>
<td></td>
<td>European Consensus on Development</td>
<td>Commission</td>
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<tr>
<td>15</td>
<td></td>
<td>Follow-up of the UN Food Systems Summit</td>
<td>Commission / Member States</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>Review of EU international trade policy</td>
<td>European Commission</td>
</tr>
</tbody>
</table>

**Policy suggestions from other EU institutions / Council**

<table>
<thead>
<tr>
<th>Page</th>
<th>17</th>
<th>Comprehensive EU food policy</th>
<th>EU institutions / Member States</th>
<th>The European Economic Social Committee (EESC) has consistently called for the development of a comprehensive food policy in the EU - complementary to the existing CAP -, in order to improve coherence across food-related policy areas, restore the value of food and promote a long-term shift from food productivism and consumerism to a more responsible food management.</th>
<th>NAT/711 (EESC) IPES-food</th>
</tr>
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<tbody>
<tr>
<td>18</td>
<td></td>
<td>Novel genomic techniques</td>
<td>EU institutions / Member States</td>
<td>The commission is assessing options for new rules on new genomic techniques, on the basis of its study regarding the status of New Genomic Techniques under Union law - as requested by the Council.</td>
<td>Commission study Council Decision (EU) 2019/1904</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>EU strategy for genetic resources for aquaculture, forests and agriculture</td>
<td>EU institutions, Member States</td>
<td>The Council invited the Commission to present an EU strategy for genetic resources for aquaculture, forests and agriculture, based on the work of the Commission on Genetic Resources for Food and Agriculture of the FAO. As a result, primary producers should benefit from easier market access to</td>
<td>Council (Conclusions, farm to fork)</td>
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<td>20</td>
<td>EU protein transition strategy</td>
<td>EU institutions / Member States</td>
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<td></td>
<td>The Commission will review the policy identified in its 2018 report on the development of plant proteins in the EU. Besides, specific attention will be paid to protein crops in Member States’ CAP Strategic Plans to reduce dependence on imported proteins.</td>
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<td>Commission report, Commission study, Council conclusions</td>
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**Policy suggestions from think tanks and academia / stakeholders**

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<tbody>
<tr>
<td></td>
<td>21</td>
<td>Various policy recommendations by international organisations and think tanks</td>
<td>EU institutions Member States International community</td>
</tr>
<tr>
<td></td>
<td>Keep trade in food and fertilisers open; Strengthen global market transparency and enable dialogue and coordination through the G20’s Agricultural Market Information System (AMIS); Find new and more diverse food supplies; Providing support to vulnerable groups; Contain the spread of African swine fever (ASF); Clarify and strengthen WTO rules on market distorting trade restrictions; Strengthen speculation controls; Avoid non sustainable policy options.</td>
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<td>FAO, Chatham House</td>
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</tbody>
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2. Food is never waste; Healthy Diets from Sustainable Food Systems for Children & all; School Meals Coalition; Aquatic and Blue Foods; Agro-ecology; Zero Hunger; Fighting food crises along the Humanitarian-Development-Peace nexus; Sustainable Productivity Growth
Strengthening European defence union

The issue in short: The challenge and the existing gaps

The EU Global Strategy stressed that 'in a more complex world of global power shifts and power diffusion, the EU must stand united.'

Both the EU and the North Atlantic Treaty Organization (NATO) showed unity in the weeks preceding and following Russia's invasion of Ukraine. With this 'premeditated and unprovoked' attack, Russia did not only oppose Ukraine's free choice and ability to determine its own destiny, but also aimed at breaking euro-Atlantic unity as well as at redefining the European continent's security architecture. Ukraine's resilience and resistance countered Russia's plans, while NATO further affirmed its 'open door policy' and strengthened its eastern flank. In March 2022, in Versailles, the European Parliament President, Roberta Metsola, warned the EU leaders that 'Putin will not stop in Kyiv, just as he did not stop in Crimea', and urged them to 'make the defence union a reality'.

The return of war on the European continent does not only confront the EU and its Member States with growing instability, but also with multi-faceted – both conventional and non-conventional – threats. To be able to rise to the self-imposed level of ambition set in the Global Strategy – protect EU citizens, respond to external crises and conflicts and build the capacity of partners – the EU needs to become a global security player, complementary to NATO, which remains the primary collective defence and deterrence tool for those 21 EU Member States that are also members of the alliance. The implementation of the Strategic Compass is key and could lead to a more robust EU in defence, allowing Member States to stand by the mutual obligation of 'assistance' deriving from Article 42(7) of the Treaty on the European Union (TEU), which the recently adopted Versailles declaration recognises as being the fundament of their solidarity.

Deep geopolitical shifts where already under way prior to the 2022 invasion of Ukraine, as big powers stepped up their game. Both China and Russia have long been questioning multilateralism and an international order based on rules, reviving the concept of 'spheres of influence'. Some interdependencies, particularly in the economic sphere, that for a while were beneficial, have proved, in the long term, rather disadvantageous, as they pointed to vulnerabilities. The most telling case in point is energy, which over the past three decades has been largely considered in economic terms as a commodity, and not from a security perspective as a strategic public good. The European Council President, Charles Michel, stressed that building a strategically autonomous EU is the challenge of a generation. It may also well be the opportunity to address vulnerabilities, bolster partnerships and strengthen the EU's role in the world by acting simultaneously on internal and external polices, and in particular by building a genuine European defence union based inter alia on a yet to be shaped common strategic culture and joint capabilities able to contribute in a meaningful way to both European and transatlantic security.

Existing policy responses

EU action

European defence cooperation is an area where a leap forward has been made over the past decade, owing to a political consensus reached in the European Council in 2013 that 'defence matters'. EU leaders agreed to step up defence cooperation along three lines: 1) crisis management, 2) the development of capabilities, and 3) the defence industry and market.
As regards crisis management, substantive progress has been achieved in recent years, in particular with the adoption of the civilian compact, intended to strengthen and streamline EU civilian missions. Only incremental progress has been regarding EU military operations, mainly reflected in the establishment of a military planning and conduct capability (MPCC) as a permanent command and control facility for 'non-executive' common foreign and security policy (CSDP) military operations. The Strategic Compass, endorsed by the European Council on 24-25 March 2022, called for a further strengthening of existing command and control structures, including the MPCC, in order to increase readiness and to develop an EU rapid deployment capacity of up to 5 000 troops by 2025. Furthermore, the modalities of flexible cooperation on CSDP missions and operations under Article 4 TEU are to be decided by 2023. Figure 50 shows both the Strategic Compass process and initiatives to be implemented.

In focus: Strategic Compass

On 24-25 March 2022, EU leaders endorsed the Strategic Compass at the end of a process they had been monitoring closely for over a year. The Strategic Compass provides a 'shared assessment of the [Union's] strategic environment'. It acknowledges that the world has become more dangerous, and that the EU is facing 'strategic competition and complex security threats' that it needs to address collectively and in a united manner, in close cooperation with like-minded partners.

The war in Ukraine has led to a shift in focus of the Strategic Compass and to the introduction of robust language on Russia. The EU condemned Russia's military aggression, its breach of international law and, in particular, the threat of resorting to nuclear weapons. The EU reaffirmed its commitment to a European security order based on the respect of the rules enshrined in the United Nations Charter, the Helsinki Final Act and the Charter of Paris, including the principle of 'the sovereign equality and territorial integrity of States'.

On China, the Strategic Compass reiterated previous language from the EU-China Strategy released in 2019, which referred to the country as 'a partner for cooperation, an economic competitor and a systemic rival'. It acknowledged China's interest in developing its 'military means' and in modernising its armed forces by 2035, stressing that it was important China continued to 'uphold global security' and a rules-based international order.

'A quantum leap forward' is needed to ensure that the EU is able to act in a more resilient manner while ensuring 'solidarity and mutual assistance'. The compass offers a detailed plan with clear-cut deadlines aimed at strengthening security and defence at the 2030 horizon in four main areas. These cover the EU's ability to 'act' when a crisis emerges; to 'secure'; to 'invest' in capabilities and new technologies; and to cooperate with like-minded partners globally (the UN), regionally (NATO), and bilaterally (Canada, Japan, Norway, the United Kingdom and the United States).

Taboos were broken in recent years as key inter-linked tools such as the coordinated annual review on defence (CARD) and the European Defence Fund (EDF) have been introduced and permanent structured cooperation (PESCO) (Articles 42.6 and 46 TEU and Protocol 10) activated. The overall aim was to identify the defence capabilities of which Member States dispose, or which should commonly be developed and funded in jointly cooperative projects, in order to be able to respond united to the threats and risks the EU is facing.

CARD allows existing capabilities to be identified and national defence planning cycles brought closer together. It could facilitate their 'gradual synchronisation and mutual adaptation'. A first CARD report was released in 2020, recommending a coordinated approach to 'defence spending, defence planning and defence cooperation' as the only way of overcoming fragmentation and duplication. A second CARD report is expected later in 2022.
The **EDF**, which has been preceded by the preparatory action on defence research (**PADR**) (€90 million for 2017-2019) and the European defence industrial development programme (**EDIDP**) (€500 million for 2019-2020), is the result of a progressive paradigm shift initiated in the European Council between 2013 and 2015. Then, EU leaders agreed to **boost** joint defence research and **fund** it from the EU budget, strengthening the Community method in the area of security and defence. The EDF benefits from an €8 billion envelope under the EU’s long-term budget, the 2021-2027 multi-annual financial framework (**MFF**). The fund comprises two windows, one dedicated to defence research, fully funded from the EU budget, and a second one dedicated to capabilities, which draws on EU budgetary means as well as on Member States’ funding. The EDF capability window allows the development of prototypes to be co-financed, with a maximum share of 20% of the costs being supported from the EU budget. It also covers acquisition, with the caveat that this component – the most costly – remains for now fully financed by the Member States. President Metsola **stressed** that the EU ‘must go beyond the European Defence Fund and make the EU budget work for our security and defence policy whenever it adds value’.

**PESCO** is a Treaty-based mechanism allowing for differentiated integration in defence. It was activated in December 2017, when 25 EU Member States (except Denmark and Malta) notified the Council of their intention to participate. Obligations undertaken by the Member States are legally binding, and 60 projects have been **developed** thus far in areas such as ‘training, land, maritime, air, cyber and joint enablers’. The flagship project is the Dutch-led **military mobility**, which includes 24 Member States and aims to facilitate the rapid transfer of military capabilities – personnel and equipment – across the continent. In parallel, the European Commission has issued a **joint communication** on improving military mobility and an **action plan**, a dual-use initiative funded under the **Connecting Europe Facility** for an amount of €1.5 billion in the period 2021-2027. Military mobility is also a key component of EU-NATO cooperation, as the more rapid transfer of national capabilities can benefit both organisations in case of need. PESCO, along with CARD and the EDF, contributes to the progressive framing of a European defence union. President Metsola **stressed** that an EU ‘capable of countering new threats’ needs smart defence spending and would require a PESCO reform.

### Figure 50: Timeline of security and defence initiatives

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>February 2021</strong></td>
<td>NATO Secretary-General meeting held by video-conference</td>
</tr>
<tr>
<td><strong>November 2020</strong></td>
<td>360-degree threat analysis presented to FAC</td>
</tr>
<tr>
<td><strong>June 2020</strong></td>
<td>Von der Leyen briefed by FAC on developing Strategic Compass</td>
</tr>
<tr>
<td><strong>February 2021</strong></td>
<td>EU Council meets to discuss Strategic Compass process</td>
</tr>
<tr>
<td><strong>November 2021</strong></td>
<td>Launch of EU-US dialogue on security and defence</td>
</tr>
<tr>
<td><strong>March 2022</strong></td>
<td>Adoption of Strategic Compass presented to FAC</td>
</tr>
<tr>
<td><strong>May 2022</strong></td>
<td>New priorities 2022-2024</td>
</tr>
<tr>
<td><strong>January 2022</strong></td>
<td>New priorities 2022-2024</td>
</tr>
<tr>
<td><strong>February 2022</strong></td>
<td>Joint press conference of Charles Michel, Ursula von der Leyen, and Jens Stoltenberg</td>
</tr>
<tr>
<td><strong>March 2022</strong></td>
<td>Adoption of Strategic Compass by FAC and endorsement by EUCO</td>
</tr>
<tr>
<td><strong>June 2022</strong></td>
<td>New joint EU-NATO declaration</td>
</tr>
<tr>
<td><strong>2022</strong></td>
<td>New civilian CSDP compact, new financing solutions for joint procurement</td>
</tr>
<tr>
<td><strong>2024</strong></td>
<td>Art. 44 TEU mobilisation</td>
</tr>
<tr>
<td><strong>2025</strong></td>
<td>EU in capability development process</td>
</tr>
<tr>
<td><strong>2025</strong></td>
<td>Revision of Strategic Compass</td>
</tr>
</tbody>
</table>
More recently, on 15 February 2022, in the run-up to the EU Strategic Compass, the European Commission presented a communication on European defence, in which it reaffirmed its commitment to supporting implementation of existing initiatives, including the EDF, and outlined 'new measures and initiatives' on, inter alia, investments, joint procurement and strengthening space cooperation. It has also recalled, among other things, that the Member States were yet to meet the 35% collective defence equipment spending target. In response to a request formulated by the European Council, the Commission also presented a roadmap on critical technologies for security and defence, in which it committed to boost dual-use research, technology, development and innovation, 'mitigate strategic dependencies from external sources', and coordinate with the US and NATO. Furthermore, again at the request of the European Council, the European Commission is, in cooperation with the European Defence Agency, to present by mid-May 2022 an 'analysis of the defence investment gaps'.

The European Peace Facility (EPF), an off-EU budget instrument that brings together the former Athena mechanism (common costs for CSDP military operations) and the African Peace Facility (mechanism to support peace and security in Africa), has been operational since 1 July 2021. The EPF consists of two pillars, namely 'military operations' and 'assistance measures'. It benefits from an envelope of nearly €6 billion for the period 2021-2027, funded by the EU Member States (except Denmark)2 on a gross national income (GNI) basis. Prior to the start of the war, the Council pledged to provide €31 million in assistance to support the Ukrainian armed forces under the EPF, and similar decisions targeted Bosnia and Herzegovina (€10 million), Georgia (€11.4 million) and Moldova (€6.3 million). After the start of the war, the amount for Ukraine was increased by €500 million, of which €450 million for lethal arms and €50 million for non-lethal supplies, and political agreements were reached for two further increases of €500 million (thus totalling €1.5 billion). As EPF implementation begins, the question of the accountability of the money spent could progressively arise; this issue could be addressed by bringing the EPF into the EU budget and hence under the scrutiny of the European Parliament.

National level initiatives

At the 2014 Wales NATO Summit, allies committed to dedicate a minimum of 2% of their gross domestic product (GDP) to defence spending by 2024. The European Council shared this commitment by calling repeatedly for an increase in defence spending, a requirement enshrined in the legally binding commitments to which Member States agreed under PESCO. Prior to the war in Ukraine, only a few EU Member States, including the Baltic countries, France, Greece, Poland and Romania, were meeting the 2% GDP defence spending criterion. In the meantime, the outbreak of the war led some of these countries to announce a further increase of their defence spending; the boldest move was made by Poland, which announced a level of 3% of GDP in defence spending for 2023 to 'increase the size of its armed forces, restore the reserve system and modernise its equipment'. Germany, which currently spends 1.5% of its GDP on defence, has announced a one-off €100 billion special defence fund. It has thus opted for a tailor-made mechanism as opposed to a permanent increase of defence spending, which would have long-lasting doctrinal consequences and 'would be harder to reverse'. Although spending is decided and implemented nationally, efforts need to be coordinated at the European level and in close cooperation with NATO to ensure best value for money, avoid duplication, foster interoperability, and stimulate the acquisition of those capabilities that would enable implementation of both the EU Strategic Compass and the upcoming NATO Strategic Concept.

EU-NATO cooperation

EU-NATO cooperation at the political and technical levels is running smoothly, and a new joint declaration is being prepared for June 2022. At the political level, the High Representative/Vice-President of the Commission (HR/VP), Josep Borrell, often attends the meetings of the North Atlantic Council, as did his predecessor, Federica Mogherini, while the European Council regularly invites the
NATO Secretary General, Jens Stoltenberg, for an exchange of views. The outbreak of the war in Ukraine allowed the European Council President, Charles Michel, the European Commission President, Ursula von der Leyen, and the NATO Secretary General, Jens Stoltenberg, to stress the unity and complementarity of the EU and NATO, two organisations that joined efforts in supporting Ukraine. At the technical level, cooperation focuses on the implementation of the seven priorities identified in the 2016 and 2018 joint declarations with NATO: hybrid threats, cyber-security, operational cooperation, capacity-building, defence capabilities, research and industry, and training.

Member States maintain a single set of forces, which, whenever needed, they can commit either to the EU or to NATO. Their (joint) efforts to strengthen existing capabilities and develop new ones, undertaken in the EU framework following the introduction of CARD, PESCO and the EDF, can only strengthen both organisations, and thus, transatlantic unity and security. Building a strong European pillar within NATO is not only about sharing the financial burden of transatlantic security by meeting the 2% GDP commitment to defence spending by 2024, but also about stepping up the ability of European allies to act, at a time when European security is under threat and EU budgetary means remain under-explored when it comes to funding security and defence.

Obstacles to implementation

Member States’ sensitivities and limitations in political will remain the main obstacle for yet another leap forward in security and defense. Within the framework of Article 42(2) TEU, the EU can progressively frame ‘a common Union defence policy’. The existing policy responses, examined above, contribute to the progressive shaping and strengthening of the European defence union called for by the European Parliament and the European Commission. The European Council has not used the term European defence union in its conclusions thus far. It has nonetheless maintained security and defence as a ‘rolling’ item on its agenda, and has been a staunch supporter of strengthening European defence cooperation. Article 42(2) TEU allows the boundary between defence cooperation and integration to be pushed even further by moving towards a ‘common defence’, but this depends entirely on the European Council.

As outlined above, technical instruments to foster joint procurement of capabilities are already in place and could be further developed should Member States break away from existing patterns. Indeed, EU Member States have committed collectively not only to increase defence spending, but also to procure 35% of defence equipment through joint collaborative projects. Nevertheless, European Defence Agency data show that only 11% of equipment was procured jointly by EU Member States in 2020. The data also show that defence equipment procurement continues to be conducted on a national basis, despite the adoption in 2009 of the Defence Procurement Directive, which aims to foster joint procurement. In the long term, there is potential for a profound change in procurement practices if EU Member States are willing to commit fully to the implementation of the EDF capability window, and more importantly, to go beyond the EDF and maximise the output that the EU budget could offer in support of security and defence.

The specialisation of national armed forces is another sensitive issue. This would require Member States to increasingly trust each other with their security, specialise their forces, share capabilities and adapt their procurement patterns to the needs identified as a result of the collective CARD exercise. It would allow for genuine economies of scale, reduce waste, and ensure better value for money. For that purpose, a new political consensus on defence would be needed in the European Council.

Policy proposals by experts and stakeholders

There is a rich and rapidly growing body of academic and think tank literature on the topic, which for the most part acknowledges the need to further step up European defence cooperation. In some cases, the focus is on individual mechanisms – CARD, PESCO and/or the EDF – and the
challenges encountered when implementing them. In others, it is on institutional aspects, with proposals including the introduction of a European Security Council, a ministers’ of defence Council configuration, or the upgrading of the European Parliament’s Sub-Committee on Security and Defence to a full parliamentary committee. Decision-making is another area where multiple proposals have been put forward, including moving towards qualified majority voting for civilian CSDP missions. A large body of literature continues to focus on crisis management and on the over 35 civilian and military missions and operations launched to date, which represent the most tangible EU contribution to peace and security.

Russia’s attack on Ukraine will, most likely, have deeper and long-lasting effects on tomorrow's international order, which not only Russia, but also China, wish to reshape. HR/VP Josep Borrell stressed that the survival of the post-war multilateral acquis with ‘the UN, international law and universal rights’ at its core was at stake. Analysts argue that the US and their European and Asian allies need to ‘develop a free world defence strategy’ to counter the revisionist views that look to revive a world based on spheres of influence. Furthermore, the EU could step up its game and use its ‘soft power tools’ – trade, development, sanctions and diplomacy – more assertively. At the same time, it could move towards becoming a ‘smart power’ by relying on its existing ‘soft power tools’ whilst developing ‘hard power tools’ allowing it to respond to the full spectrum of threats and to be a more reliable transatlantic partner.

The EU could go beyond the existing fragmentation and duplication of defence capabilities and build tomorrow’s military capabilities by fully embracing the scholarly enunciated principle of ‘pooling, sharing and specialisation’. Furthermore, a reviewed PESCO could give more space to projects such as the EUFOR crisis response operation core, which in case of clarification of the modalities of activation of Article 44 TEU could offer participating Member States the possibility of pledging forces on permanent bases, something which scholars argue would move the entire EU beyond interoperability towards integration.

Position of the European Parliament

In a February 2022 resolution, the European Parliament stressed that ‘the Strategic Compass was a starting point for implementing a common European defence in line with the provisions laid out in Article 42(2)TEU’ and ‘should constitute a major step towards a genuine European defence union’, which is part of the EU’s ‘objective of achieving strategic autonomy’. It underlined that the European External Action Service (EEAS) ‘must closely monitor and ensure the traceability and proper use of the material delivered to our partners under the EPF’. It also noted that several bodies, including the EU Satellite Centre (SATCEN) and the European Security and Defence College ‘should benefit from structural Union funding’.

Cooperation with partners, in particular the UN and NATO, is one of the elements most emphasised by Parliament, which reiterated the view that European NATO member countries needed ‘to take on more burden-sharing responsibilities in protecting the transatlantic space and respond to new hybrid threats’. Parliament has also stressed that it ‘expects the final draft of the Strategic Compass and the NATO Strategic Concept to be coherent with one another to ensure strengthened collaboration and burden sharing, and to identify ways to reinforce EU-NATO cooperation’. It considered Russia’s aggressiveness ‘as a major security threat for the European continent’, and warned of ‘severe economic and financial sanctions' the EU was prepared to adopt in close cooperation with the US and other partners in response to the invasion of Ukraine. Parliament has also called to ‘assess and develop options for the establishment of EU standing multinational military units financed both from the European Peace Facility and the EU’s budget by making full use of the current possibilities offered by the EU Treaties’.
**Possible action**

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<td>Successive resolutions</td>
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<td>Mutual assistance clause</td>
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<td>EU institutions/Member States</td>
<td>Assess existing PESCO projects Move beyond and use PESCO to develop capabilities</td>
<td>Successive resolutions</td>
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<td>5</td>
<td>EDF implementation</td>
<td>EU institutions/Member States</td>
<td>Establish an intellectual property policy protective of defence research</td>
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### Proposals submitted by Member States and/or EU institutions

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<td>7</td>
<td>Article 44 TEU operations</td>
<td>Council</td>
<td>Decide on the procedure applicable in the case of activation</td>
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<td>8</td>
<td>VAT exemption</td>
<td>EU institutions</td>
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### Policy suggestions from think tanks and academia

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<th>Action Outline</th>
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<td>Build a European defence union</td>
<td>EU institutions / Member States</td>
<td>Build a common doctrine and strategic culture Build interconnected national defence capabilities Build a strong European pillar in NATO</td>
<td><a href="#">EPRS study</a> Numerous studies on joint capabilities and EU-NATO relations</td>
</tr>
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<td>11</td>
<td>Political consensus on defence policy</td>
<td>European Council</td>
<td>European Council to meet regularly to discuss security and defence matters</td>
<td><a href="#">EPRS study</a></td>
</tr>
<tr>
<td>12</td>
<td>Regularly assess common threats</td>
<td>EU institution/ Member States</td>
<td>Harmonise national security strategies/regularly review the Strategic Compass</td>
<td><a href="#">Strategic Compass</a></td>
</tr>
</tbody>
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1. This is an adapted and expended version of the paper presented at the European Parliament Administration’s Innovation Day 2021.
2. Denmark has an EU-defence opt out, which could be reversed pending the result of a referendum the country is organising in June 2022.
Consolidating EU internal security

The issue in short: The challenge and the existing gaps

In a rapidly changing and increasingly interconnected world, the EU security landscape has become very complex and unpredictable. When commenting on the adoption of the July 2020 EU security union strategy, Commission Vice-President Margaritis Schinas described security as a cross-cutting issue, pointing to the 'the false dichotomy between online and offline, between digital and physical and between internal and external security concerns and threats'.

Some of these threats are indeed of an external nature and their manifold impact on the bloc’s stability calls the distinction between internal and external security into question. The crisis at the EU’s eastern borders is one illustration of such a ‘hybrid threat’, with the Belarussian regime seeking to destabilise the EU by instrumentalising migration flows and playing on the related insecurities of EU citizens. The current war in Ukraine is likely to have a major impact on the EU, extending well beyond the military and foreign relations spheres. Possible implications for internal security are already illustrated by reported attempts at trafficking for sexual exploitation, targeting persons fleeing Ukraine (mostly women and children), as well as cases of online fraud and cyber-attacks on critical infrastructure. They also include the risk of large-scale diversion of firearms, not least given Ukraine’s key role in the global arms trade, one that has only increased in recent years. Moreover, there is a possibility of criminals making use of the situation at the EU border with Ukraine to enter the EU territory using false identity documents.

Another set of security challenges relates to societies’ growing reliance on digital technologies and the internet. This ‘online dependency’ has raised the stakes regarding the potential impact of cyber incidents, in particular large-scale attacks targeting critical infrastructure and possibly leading to the disruption of essential services. While artificial intelligence (AI) can be used to tackle these threats, it is a double-edged sword as it can also be exploited for malicious ends. The proliferation of cybercrime and difficulties obtaining electronic evidence stored in foreign jurisdictions call for the modernisation of law enforcement and efforts to seek solutions at EU and international levels so that the work of crime-fighting authorities is not impeded by territorial boundaries.

The Covid-19 pandemic has impacted on the EU’s internal security in various ways. While many activities, such as working and schooling, moved online, so did criminal syndicates. According to Europol, the number of malware and ransomware attacks has surged, as has the availability of (mostly self-produced) child sexual abuse material. Moreover, extremist narratives and disinformation spread online may have fallen on fertile ground in the times of pandemic-related insecurity, potentially leading to further polarisation and radicalisation towards violent extremism.

The EU has gradually increased its capabilities in the field of internal security, developing an arsenal of bodies and instruments to address security threats, within the strict boundaries set by the EU Treaties. Nevertheless, issues remain regarding the extent of information sharing between Member States’ authorities and the use they make of EU judicial and police cooperation tools and agencies. As for the external aspects, while the as yet slow development of the common security and defence policy (CSDP) may present a range of obstacles to effective EU action, the Ukraine crisis seems to be providing impetus to overcome them.
Existing policy responses

EU action

Whereas security is primarily within Member States' remit, according to Article 67(3) of the Treaty on the Functioning of the EU (TFEU), 'the Union shall endeavour to ensure a high level of security' through a variety of measures. In this vein, the EU has developed the 'security union' concept, based on the idea that the EU and its Member States need to shift from cooperating to protect the national security of each of them to protecting the collective security of the Union as a whole.

The new security union strategy, adopted in July 2020, adopts an integrated approach, aimed at ensuring security in both the physical and digital environments and takes into account the interconnection between internal and external security. The strategy sets four main priorities: achieving a future-proof security environment, tackling evolving threats, protecting Europeans from terrorism and organised crime, and building a strong European security ecosystem.

A future-proof security environment. Whereas cybersecurity is a prerogative of the Member States, over the years the EU has developed a complex and multi-layered cyber ecosystem, spanning an array of policy areas, both internal (justice and home affairs, digital single market) and external (diplomacy and defence). Under the new EU cybersecurity strategy, the Commission put forward legislative proposals to update the network and information security directive (NIS2) and the rules on critical infrastructure protection, to enhance, respectively, the cyber and physical resilience of critical entities and networks. It also intends to propose an EU Cyber Resilience Act in 2022. Work has started on setting up an EU joint cyber unit – a platform for operational cooperation, bringing together civilian, diplomatic, law enforcement and defence actors. Under its external action, the EU will continue to use its cyber sanctions regime, as part of its cyber diplomacy toolbox. A Member States' EU cyber intelligence working group is also planned.

Tackling evolving threats. Faced with hybrid threats that are unprecedented, in both scale and diversity, the EU set out its approach to counter hybrid threats in the 2016 joint framework and the 2018 joint communication on bolstering hybrid resilience. The 2020 security strategy announced a new EU approach based on mainstreaming hybrid threat considerations into all policy initiatives. Commission is also aiming to develop situational awareness, with the EU Hybrid Fusion Cell at the EU Intelligence and Situation Centre (EU INTCEN) being the focal point for hybrid threat assessments. Another important objective is to modernise EU law enforcement, enhancing its capacity to conduct digital investigations and to use adequate tools, including electronic evidence, AI and big data analytics. The proposed EU e-evidence framework would allow competent authorities to request electronic data needed for investigation and prosecution directly from service providers, while the future EU AI act should regulate the use of AI in law enforcement, classified as 'high risk'. In 2022, the Commission is also intending to suggest a way forward for lawful and targeted access to encrypted information in criminal justice.

Protecting Europeans from terrorism and organised crime. Tackling the terrorism threat has long been and remains a priority, as illustrated by the adoption of the new EU counter-terrorism agenda in December 2020. The main EU instrument in this area is the Combating Terrorism Directive, which harmonised definitions and sanctions for terrorist offences across the EU. The EU has also taken initiatives to prevent violent extremism, especially online, such as the regulation on dissemination of terrorist content online, to apply as of 7 June 2022, or the recent proposal to add hate crime and hate speech to the list of serious crimes with a cross-border dimension under Article 83(1).

The EU has continued to reinforce its framework for combating money laundering (AML) and terrorist financing (CFT), with an ambitious AML/CFT package presented in July 2021. The package provides for the establishment of a new EU authority: a decentralised EU regulatory agency to be in charge of AML/CFT supervision and supporting EU financial intelligence units (FIUs). The package
also includes measures on crypto-assets, extending to such assets the obligation to report suspicious transactions and introducing a ban on anonymous crypto-wallets.

In order to prevent terrorists and criminals from easily acquiring firearms or reactivating deactivated weapons, the directive on the control of the acquisition and possession of weapons started to apply from 2018, accompanied by an implementing regulation on deactivation standards. The new 2020-2025 action plan on firearms trafficking aims to address the remaining legal loopholes and inconsistencies in firearms controls that hinder police cooperation and to step up international cooperation, focusing on south-east Europe (western Balkans, Ukraine and Moldova).

A number of recent initiatives address other specific forms of crime. They include strategies and action plans against trafficking in human beings, drugs, organised crime and child sexual abuse online. A renewed action plan on migrant smuggling develops, for instance, an EU response to the instrumentalisation of irregular migration by State actors. As to human trafficking, the Commission is conducting an evaluation of the 2011 EU Anti-Trafficking Directive with a view to its possible review.

Regarding the EU’s preparedness and response to public health-related risks, such as chemical, biological, radiological and nuclear (CBRN) threats, the Commission is building up strategic reserves of response capacities through the EU Civil Protection Mechanism.

Figure 52: Consolidating EU internal security

A strong European security ecosystem. In a Europe with no internal borders, information sharing and data exchange between national authorities is of the utmost importance, in order to address complex cross-border threats. In December 2021, the Commission presented a police cooperation package, with proposals on information exchange between law enforcement authorities, on automated data exchange under a renewed Prüm framework, and on operational police cooperation. It complements and updates the already existing information exchange architecture, supporting border management and law enforcement cooperation and comprising a growing number of EU information systems, which rely increasingly on AI technologies. New legislation adopted in 2019 established interoperability rules between these systems, with technical solutions to be put in place by 2023 and to be managed by the eu-LISA. An important development was the decision to expand Frontex (transformed into a European Border and Coast Guard Agency) to include a standing corps of up to 10 000 operational staff by 2027. Improving management of the
EU external borders (including in cases of health crises or hybrid attacks) is also one of the objectives of the ongoing Schengen reform.

The EU has continuously built on its institutional architecture, reinforcing the role of its agencies in the area of security and justice. In February 2022, the co-legislators agreed to strengthen Europol’s mandate, empowering the agency to cooperate more effectively with private parties, conclude international agreements, conduct research and innovation activities, and process big data sets. The Commission also made proposals on modernising the Eurojust case management system and on upgrading its Judicial Counter-Terrorism Register. It also took an initiative to extend the mandate of the newly created European Public Prosecutor Office (EPPO) to terrorism.

National level initiatives

The EU recognises the fact that in some areas, national, regional and local authorities may be best placed to address security threats. Radicalisation towards violent extremism and terrorism is one such area where the EU role has been limited to supporting the activities of various stakeholders, providing funding for research and collecting and disseminating best practices. This includes the activities of the Radicalisation Awareness Network (RAN), connecting frontline practitioners from across Europe with one another, as well as with academics and policymakers. The protection of public spaces is also mostly in hands of non-EU level actors, with the EU setting up forums for the systematic exchange of information, publishing guidance and providing funding. Regarding EU security-related funding, in the 2021-2027 multiannual financial framework (MFF), for the first time, a separate Heading 5 is dedicated to security and defence. The Internal Security Fund (ISF), allocated € 1.93 billion (current prices), is the main instrument aimed at ensuring EU internal security, by tackling terrorism and radicalisation, serious and organised crime and cybercrime.

EU action with external partners/international organisations

The transnational nature of many threats to EU internal security underscores the need for international cooperation. This could take form of international agreements between the EU and third countries and international organisations, as well as of agreements or working arrangements between EU agencies and their foreign partners. The 2001 operational agreement between Europol and the Interpol – allowing for the transfer of personal data – is one example of the latter. In April 2021, the Commission published a recommendation for a Council decision authorising the negotiations for a cooperation agreement between the EU and Interpol. The agreement, currently under negotiation, would be broader in scope and cover also other EU agencies, such as Eurojust, EPPO and Frontex. One of the principal benefits sought is the access of EU bodies to the whole range of Interpol’s databases.

Cross-border access to electronic evidence in criminal matters is an area regulated by a web of international agreements. The EU has been seeking to assert its role as a rule setter in this field: in parallel with the 2018 'e-evidence' proposals, the Commission, on behalf of the EU, entered into negotiations on an agreement with the United States, where the largest service providers are based, and on the Second Additional Protocol to the Council of Europe Convention on Cybercrime (known as the 'Budapest Convention'), devoted specifically to enhanced co-operation and disclosure of electronic evidence. Direct cooperation between foreign authorities and service providers is among the issues covered by these initiatives. As for the Protocol, the negotiations have been concluded and it is set to be open for signature in May 2022.

In 2019, the United Nations (UN) passed a resolution, introduced by the Russian Federation, with a proposal meant to serve as the baseline for developing a UN convention on cybercrime. The proposal largely extends the catalogue of cyber offences while making no reference to the protection of human rights and liberties (such as freedom of expression), thus raising issues with the UN members’ obligations under the existing treaties, such as the Budapest Convention. It has been strongly opposed by the EU.
Regarding hybrid threats, and cybersecurity in particular, since the Warsaw Joint Declaration of 2016, the EU has enhanced its cooperation with NATO and its agencies and related bodies (such as the Helsinki-based European Centre of Excellence for Countering Hybrid Threats). Countering hybrid threats and expanding coordination on cyber-security and defence are two of the seven areas for enhanced cooperation decided at the time. Exchanges of information and assessments, joint training and reciprocal participation in cyber-exercises are among ongoing activities in the cyber realm.

Obstacles to implementation

When the ‘security union’ concept emerged in 2016, some commentators called into question the achievability of such an ambition, pointing to the diversity and fragmentation of the ‘insecurity landscape’ among the Member States. One of the aims stated by the Commission was to close the gaps in cooperation and bring about a culture change, where information exchange is guided by the principle of the ‘need to share’ instead of the ‘need to know’. EPRS reports on the cost of non-Europe in the area of freedom, security and justice do indeed point to a lack of information-sharing among various EU and national information systems, and to the limited use made of the (analytical) support and coordination possibilities provided by EU agencies. The report on the fight against terrorism highlights the need for more and better impact assessments and evaluations of EU measures taken so far, as regards their effectiveness, efficiency and fundamental rights compliance.

While there is a wealth of EU instruments in the field of internal security, they are not always used to their full potential. The framework for police cooperation is fragmented and characterised by the coexistence of cooperation agreements between Member States with a range of EU instruments, such as the ‘Prüm Decisions’ (currently under review). One consequence is uncertainty as to which rules national police should follow when intervening in another Member State. While information exchange between police forces has improved, Member States’ security and intelligence services are reluctant to cooperate through EU channels.

Similarly, in the area of cybersecurity, a 2019 EU Court of Auditors (ECA) report pointed to the fragmentation and complexity of the EU cybersecurity ecosystem. According to the ECA, there is a lack of measurable objectives, outcomes of EU action are rarely measured, and few policy areas have been evaluated. Among the challenges, the ECA points to the need to shift towards a performance culture with embedded evaluation practices and to develop a rapid detection and response capacity.

Another obstacle that can hinder the transposition of EU measures into national laws is the difference between national legal orders in general, and criminal laws in particular. For example, the recent evaluation of the Counter-Terrorism Directive showed that in some Member States challenges arose around classifying some types of conduct, e.g. violent extreme right-wing acts, as acts of terrorism.

Evaluations of the efficiency and effectiveness of the EU security-related measures have long been scarce. In 2017, the Commission issued a first comprehensive assessment of EU security policy. It concluded that EU intervention in this area has been relevant and appropriate. It stressed however the need for proper implementation of different instruments to ensure their effectiveness, as well as the necessity to update existing tools, adapting them to evolving threats. In 2020, Commission followed-up with a report taking stock of the implementation of internal security policies between 2017 and 2020, which points to a significant increase in the number of evaluations and reports conducted in this area and their positive impact on adapting the policy and legislative framework.

The ultimate challenge for EU security policy pertains to its very foundations, as it is supposed to be grounded in common European values, such as democracy, the rule of law and fundamental rights (including data protection). Many security-related instruments at both national and EU levels have been criticised for not respecting these values.
Policy proposals by experts and stakeholders

Given the primary role of decentralised agencies in EU internal security, many of the suggestions offered by experts and stakeholders focus on their desired evolution. For example, to address the problem of prosecutors and police having differing powers across the EU – which hampers their cooperation in the framework of Eurojust and Europol respectively – it has been proposed that the two agencies should be merged into a single EU criminal justice cooperation body. Less radical ideas for strengthening the links between them include relocating Europol and Eurojust to a single building, connecting them with a common IT system and creating a single data protection regime for these bodies.¹

Although Europol's mandate is set to be further strengthened by the ongoing reform, the possibility of turning the agency into an FBI-type body, alluded to by the European Parliament in 2017, is not among options considered under the current negotiations. However, the idea has been repeatedly floated by political leaders and parties and the subject of academic debate.² Such a development would entail granting the agency executive powers, such as to conduct its own investigations and make arrests, precluded though by the current legal framework (Article 88(3) TFEU provides for a supportive rule for Europol and stipulates that the ‘application of coercive measures shall be the exclusive responsibility of the competent national authorities’).

Likewise, calls have been made to form a 'European intelligence agency', with the academic world divided, however, on the issue of the feasibility of such a move and the best way forward for the EU to improve its intelligence capabilities.³ One author presented the idea of developing intelligence cells serving the president of the Council and the president of the Commission, rather than one central agency. Enhancing cooperation among existing European bodies is a less radical recommendation: a 'transnational committee of politicians and security experts' could be set up to analyse the necessary procedural and organisational changes.

Specific improvements have been proposed regarding cooperation between police and security and intelligence services. As first step, liaison officers could be seconded by Europol to the Counter-Terrorism Group (CTG) and vice versa. If successful, cooperation could then develop along the lines of the German Joint Counter-Terrorism Centre (GTAZ): Europol and the CTG would jointly recommend measures on persons of interest to national security and intelligence services whose refusal to act on such recommendations would need to be justified.

In the area of common foreign and security policy (CFSP), in 2018, before the process leading to the adoption of the Strategic Compass was launched, there was a suggestion to make use of enhanced cooperation under Article 329(2). The participating Member States would commit to a division of labour between their respective intelligence services that would work on jointly agreed thematic and regional priorities. A European circle of intelligence analysis would thus be set up whereby the planning and prioritisation of intelligence resources would be coordinated at EU level, the collection and initial processing of raw intelligence would remain at national level, and the EU-SIAC would provide the final evaluation, leading to the dissemination of intelligence reports to decision-makers and feeding into the next cycle. In parallel, political forums could be strengthened to streamline the use of intelligence by policy-makers (e.g. a European Security Council could be established, as proposed by former German Chancellor Angela Merkel).

Position of the European Parliament

In its 2020 resolution on the EU security union, the Parliament welcomed the new strategy, while emphasising the need to fully implement and evaluate existing EU legislation in this area, such as the interoperability of EU information systems. It also called for proper funding and staffing of EU agencies and bodies in the field of justice and home affairs (JHA) and reiterated its calls for the assessment of a potential extension of the European Public Prosecutor’s Office’s (EPPO) mandate, once it was fully operational.
In its 2018 resolution setting out the recommendations of the Special Committee on Terrorism, Parliament had already advocated strengthening the specialised EU agencies and services and providing them with adequate means, as well as expanding EPPO powers to tackle terrorism and organised crime. On this occasion, Parliament also urged the Member States and EU institutions to work towards a common strategic culture, and called for efforts to step up international cooperation. It also called for the setting up of an EU joint intelligence academy, with common standards, in order to combine resources and develop synergies, trust and a common intelligence culture.4

In 2017, the Parliament made several proposals to further consolidate the EU's institutional framework in the JHA area. One possibility would be to provide Europol and Eurojust with genuine investigation and prosecution competences and capabilities, possibly by transforming them into a genuine European Bureau of Investigation and Counter-Terrorism, with due parliamentary scrutiny. Another would be to establish a European investigation and intelligence capacity within Europol, under the control of the judiciary. In this context, Parliament recommended making security a shared competence, considering that security would be better ensured if it were not an exclusive competence of the Member States. The Parliament also proposed to set up a European Intelligence Office to support the EU's common foreign and security policy (CFSP).

The 2021 resolutions on AI in criminal law and the EU's cybersecurity strategy attest to Parliament's attentiveness to the evolution of threats and challenges linked to technological progress and digital transformation, including those of a 'hybrid' nature. In this context, in its 2022 resolution on foreign interference, Parliament called on the EU institutions to further develop and boost the important work of structures such as EU INTCEN and Hybrid Fusion Cell, among others, and welcomed the establishment of the EU cyber intelligence working group within EU INTCEN with a view to advancing strategic intelligence cooperation. Parliament also recommended the creation of a joint cyber unit, to close the information sharing gap and enable full use to be made of existing structures, resources and capabilities, in order to protect the EU from serious cross-border cyberattacks.

In focus: Intelligence cooperation in the European Union

Under Article 4(2) TEU, 'national security' – and thus intelligence activities – remains the sole responsibility of the EU Member States. Article 73 TFEU leaves it to them to organise 'such forms of cooperation and coordination between the national security services that they deem appropriate'.

Until now, EU Member States have not gone far in sharing or pooling intelligence at EU level. National intelligence and security services have traditionally favoured (mostly bilateral) informal exchanges through other channels. These include the 'Club de Berne', composed of the heads of security services of the EU Member States, Norway and Switzerland, and the Counter-Terrorism Group (CTG). The CTG also acts as the interface between the Club de Berne and the EU, as illustrated by its cooperation with Europol.

There are currently three intelligence bodies within the EU structure: the EU Intelligence and Situation Centre (EU INTCEN), the EU Military Staff Intelligence Directorate (EUMS INT) – both forming the Single Intelligence Analysis Capacity (SIAC), which combines civilian and military intelligence – and the EU Satellite Centre (SatCen). INTCEN, a directorate within the European External Action Service, produces strategic analysis based on information provided on a voluntary basis by national intelligence and security services, diplomatic reporting, etc. Having no operational capabilities, INTCEN does not generate its own intelligence, with SatCen being the only EU body to do so, based on commercially available satellite images. Europol is yet another EU body dealing with intelligence and its growing role in counterterrorism could translate into more EU-facilitated intelligence sharing between police and secret services. However, the agency's activities in this respect have met with mistrust and 'bureaucratic resistance' by the latter.
In her 2021 State of the Union address, President von der Leyen proposed to improve the EU’s ‘situational awareness’ as the foundation for collective decision-making, by setting up a ‘Joint Situational Awareness Centre’. The discussions on this idea were undertaken in the context of the EU Strategic Compass for the CSDP, adopted in March 2022. The Compass includes plans to boost the EU’s intelligence capacities, e.g. SIAC and SatCen, to enhance situational awareness and strategic foresight. At least once every three years, the SIAC is supposed to review – in concert with Member States’ intelligence services – the ‘EU threat analysis’, i.e. a classified report providing a ‘comprehensive, 360-degree’ analysis of the full range of threats and challenges faced by the EU.

Figure 53: Pyramid of instruments at the disposal of the EU and its Member States

Possible action

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<th>References (sources of ideas)</th>
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<td>1</td>
<td>Extending EPPO mandate to terrorism and organised crime</td>
<td>Council/Parliament</td>
<td>Adopt a Council decision to extend the powers of the European Public Prosecutor’s Office to include serious cross-border crime under Article 86 TFEU</td>
<td>Parliament resolutions on security union and recommendations of the Special Committee on Terrorism (TERR)</td>
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<td></td>
<td>Proposal</td>
<td>Institutions</td>
<td>Description</td>
<td>Resolution/Process</td>
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<tr>
<td>2</td>
<td>Setting up an EU joint intelligence academy</td>
<td>Commission/Parliament/Council</td>
<td>Set up an EU joint intelligence academy with common standards, in order develop a common intelligence culture</td>
<td>Parliament resolution on recommendations of the Special Committee on Terrorism (TERR)</td>
</tr>
<tr>
<td>3</td>
<td>Setting up a European bureau of investigation and counter-terrorism</td>
<td>Commission/Parliament/Council</td>
<td>Provide Europol and Eurojust with genuine investigation and prosecution competences and capabilities</td>
<td>Parliament resolution on possible evolutions of and adjustments to the current EU institutional set-up</td>
</tr>
<tr>
<td>4</td>
<td>Making security a shared competence</td>
<td>Council/Parliament</td>
<td>Change Treaty provisions to make security a shared competence, e.g. to create a European investigation and intelligence capacity within Europol under the control of the judiciary</td>
<td>Parliament resolution on possible evolutions of and adjustments to the current EU institutional set-up</td>
</tr>
<tr>
<td>5</td>
<td>Setting up a European intelligence office</td>
<td>Commission/Parliament/Council</td>
<td>Set up a European intelligence office to support CFSP.</td>
<td>Parliament resolution on possible evolutions of and adjustments to the current EU institutional set-up</td>
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<tr>
<td>6</td>
<td>Increasing cyber resilience</td>
<td>Commission/Parliament/Council/ENISA</td>
<td>Review the directive on security of network and information systems (NIS2)</td>
<td>EU's cybersecurity strategy</td>
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<td>Review the rules on critical infrastructure protection, aligning them with NIS2</td>
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<td>Set up a joint cyber unit - a cooperation platform for an EU coordinated response to large-scale attacks</td>
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<td>7</td>
<td>Strengthening cyber intelligence capacities</td>
<td>EEAS/Council</td>
<td>Establish Member States' EU cyber intelligence working group within INTCEN;</td>
<td>EU's cybersecurity Strategy</td>
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<td>Boost cyber intelligence capacities to support civilian and military CSDP missions</td>
<td>Strategic Compass</td>
</tr>
<tr>
<td>8</td>
<td>Countering cyber and hybrid threats</td>
<td>Council/EEAS/Member States</td>
<td>Strengthen the EU Cyber Diplomacy Toolbox</td>
<td>Strategic Compass</td>
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<td>Develop an EU Hybrid Toolbox, including EU Hybrid Rapid Response Teams</td>
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<td>No.</td>
<td>Policy Area</td>
<td>Institutions Involved</td>
<td>Objective</td>
<td>Document Ref.</td>
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<td>9</td>
<td>Cyber resilience act</td>
<td>Commission/Parliament/Council</td>
<td>Adopt rules to increase common approach to cyber infrastructure and standards</td>
<td>Commission 2022 work programme</td>
</tr>
<tr>
<td>10</td>
<td>EU artificial intelligence act</td>
<td>Commission/Parliament/Council</td>
<td>Adopt horizontal rules tailored on a risk-based approach to AI systems</td>
<td>COM/2021/206 final</td>
</tr>
<tr>
<td>11</td>
<td>Extending the list of EU crimes to hate speech and hate crime</td>
<td>Council</td>
<td>Adopt a Council decision identifying areas of crime not listed in Article 83 TFEU</td>
<td>COM/2021/777 final</td>
</tr>
<tr>
<td>12</td>
<td>Police cooperation package</td>
<td>Commission/Parliament/Council</td>
<td>Legislate on operational police cooperation and information and automatic data exchange</td>
<td>Police cooperation code, press release</td>
</tr>
<tr>
<td>13</td>
<td>EU anti-money laundering (AML/CFT) package</td>
<td>Commission/Parliament/Council</td>
<td>Set up an EU AML/CFT Authority; replace AML directives with a directly applicable regulation</td>
<td>Beating financial crime, press release</td>
</tr>
<tr>
<td>14</td>
<td>Schengen reform</td>
<td>Commission/Parliament/Council</td>
<td>Update Schengen rules to reinforce governance of the Schengen area</td>
<td>Schengen new rules, press release</td>
</tr>
<tr>
<td>15</td>
<td>Digitalisation of EU justice systems package</td>
<td>Commission/EP/Council</td>
<td>Modernise Eurojust’s information system, to incorporate the EU Judicial Counter Terrorism Register</td>
<td>Modernising judicial cooperation, press release</td>
</tr>
<tr>
<td>16</td>
<td>Strengthening Europol mandate</td>
<td>EP/Council</td>
<td>Enhance cooperation with private parties, personal data processing, research and innovation capacity</td>
<td>COM/2020/796 final</td>
</tr>
<tr>
<td>17</td>
<td>EU-Interpol Agreement</td>
<td>Commission</td>
<td>Set up a framework for cooperation between the JHA agencies and Interpol</td>
<td>COM/2021/177 final</td>
</tr>
<tr>
<td>19</td>
<td>Strengthening SIAC and SatCen</td>
<td>Council/EEAS/Member States</td>
<td>Strengthen the Single Intelligence Analysis Capacity and the EU Satellite Centre by 2025</td>
<td>Strategic Compass</td>
</tr>
<tr>
<td>20</td>
<td>Joint situational awareness centre</td>
<td>Commission/Council</td>
<td>Improve the EU’s situational awareness to inform collective decision-making</td>
<td>2021 State of the Union address</td>
</tr>
</tbody>
</table>
### Policy suggestions from think tanks and academia / policy examples from third countries

| 21 | Merging Europol and Eurojust | Commission/Parliament/Council | Merge the two agencies or at least strengthen the links between them, e.g. by locating them in a single building | Should Europol and Eurojust merge?, H. Brady, (2007) |
| 22 | Reforming the EU’s intelligence architecture | Commission/Council | Set up intelligence cells serving the presidents of the Commission and of the Council (as an alternative to an EU intelligence service) | On the Road to a European Intelligence Agency?, J-M. Palacios (2020) |
| 23 | Creating a framework for cooperation between police and security/intelligence services | Commission/Parliament/Council | Secondment of liaison officers at Europol and the CTG (first step) Cooperation modelled on the German Joint Counter-Terrorism Centre (second step) | Intelligence Support for EU Security Policy, R. Bossong (2018) |
| 24 | European circle of intelligence analysis (under CFSP) | Commission/Parliament/Council | Create a cycle for coordinating the planning and prioritisation of intelligence at the EU level building up on the EU SIAC | Intelligence Support for EU Security Policy, R. Bossong (2018) |
| 25 | European security council | European Council/Council | Establish a ‘European security council’ made up of rotating Member States in a form to be determined | Speech by Chancellor Angela Merkel to the European Parliament (2018) |

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2. See R. Drachenberg, Making Europol an EU ‘FBI’?, in *Towards a more resilient Europe post-coronavirus: Options to enhance the EU’s resilience to structural risks*, EPRS, European Parliament, April 2021, pp. 131-139.


4. A similar idea put forward in 2017 by French President Emmanuel Macron resulted in the establishment of the *Intelligence College in Europe*, a platform for dialogue on non-operational issues between Member States’ intelligence communities, practitioners, academics and decision-makers. This is an intergovernmental as opposed to an EU initiative however.
The coronavirus crisis has demonstrated not only that the European Union faces a variety of risks, and that those disparate risks are inter-linked, but that the response to such challenges to the Union - even in areas in which the EU does not have explicit competence - is stronger with the Union and its Member States acting together. Russia’s war on Ukraine, which was launched while this study was being drafted, shows us not just the added value of concerted action by the Union but also the ability of EU institutions and Member States to find new and effective solutions to deal with major shocks. This paper, the first in an annual series, seeks to assess the risks to, and capabilities and resilience of, the EU system. Building on a review of global risks, it considers in detail specific risks with the potential to harm Europe and its people. It then sets out options for policy responses which can ensure Europe is more able to address the dangers of such risks and minimise the potential damage. Among the options set out are those previously included in European Parliament resolutions, in positions from other EU institutions, and in policy papers from think tanks and stakeholders.