

By Max Bergmann, Pierre Morcos, Colin Wall, and Sean Monaghan

AUGUST 2022

THE ISSUE

Russia's war of aggression against Ukraine has been a wake-up call for Europe, which has taken decisive steps to assist Ukraine and shore up European security and defense. Yet this moment could be short-lived if not followed by a sustained, collective effort to transform and rationalize European defense. Without this, additional European defense spending may be wasted and the continent will continue to rely on the United States for its defense. European nations should fully leverage the European Union, the North Atlantic Treaty Organization (NATO), and other multilateral formats to overcome fragmentation and avoid a piecemeal approach to defense. By doing so, they can invest together in modern capabilities, build a strong, resilient, and open industrial base, and think creatively to pool and share forces. Importantly, the United States has a crucial role in providing both practical and political support to achieve this shared goal of a stronger and more capable European defense.

INTRODUCTION

Russia's brutal war of aggression in Ukraine has mobilized European nations to think more seriously about security and defense. In addition to sending an impressive surge of military equipment to Ukraine and making commitments at the Madrid summit to reinforce the North Atlantic Treaty Organization's (NATO) eastern flank with troops and materiel, the European Union also took new steps in its evolution as a credible defense actor. Perhaps most critically, European nations have also announced substantial increases to their defense budgets. A burst of political will—ignited by the invasion and fanned by its brutality—has fueled this response.¹

These developments are significant, but it would be premature to assume they mark the beginning of a new era. A true paradigm shift will require a sustained and focused effort to lock in the commitments that have already been made, ensure efficient implementation of

those commitments, and build the institutional structure necessary to keep European defense moving in the desired direction.

A TRANSFORMATIONAL MOMENT?

After the Cold War, European nations largely permitted their militaries to atrophy. The focus of military activity shifted from hypothetical conflict against a peer adversary to expeditionary operations focused on crisis management, counterinsurgency, and counterterrorism. With the exception of the Balkans, these operations were also primarily out of area; the possibility of major war on the European continent appeared low.

This began to change after the original Russian invasion of Ukraine in 2014. Russia's act of aggression catalyzed NATO's European allies to commit at the Wales summit to meet the alliance's target of spending 2 percent of GDP on defense.² After decades of low-end operations, some European countries began the painful process of

reconstituting their militaries for high-intensity warfare. On land, this has included a focus on rebuilding the readiness and aptitude of heavy, combat-capable brigades.³ At sea, it has included investments in principal surface combatants, submarines, amphibious vessels, and longrange strike, among other areas.⁴

After February 24, 2022, the argument for robust investment in the capabilities required for modern collective defense went from sensible to irrefutable. A Russian attack on a NATO member is no longer unthinkable. Indeed, NATO's new strategic concept says as much: "We cannot discount the possibility of an attack against Allies' sovereignty and territorial integrity." 5

As European security has become more perilous, U.S. attention has increasingly been pulled toward Asia. Despite Russia's invasion of Ukraine, the U.S. Department of Defense has continued to prioritize China, which the unclassified summary of the forthcoming National Defense Strategy calls "our most consequential strategic competitor and the pacing challenge." In other words, the U.S. pivot to the Indo-Pacific may have been paused or lessened in degree by events in Europe, but it has not been canceled. The need for the United States to provide precious military assets to defend Europe against Russia, support U.S. allies in Asia, and maintain other global commitments, such as in the Middle East, may put tremendous strain on the United States. Washington will therefore need more from Europe.

Europe seems on its way to stepping up to this challenge. There has been strong political will in Europe to take bolder steps, which has manifested in robust EU sanctions on Russia and support for Ukraine, including lethal and non-lethal aid and working to take in refugees—an area the European Union has found difficult in the past.⁷ The European Union's recently released *A Strategic Compass* for Security and Defense signals a higher level of ambition for the bloc on foreign and security policy.8 In NATO, Europeans will contribute to troop reinforcements on the eastern flank, and two new European nations with highly capable militaries, Finland and Sweden, will join the strategic alliance.9 Most pertinently, the majority of European countries—from economic powerhouse Germany to tiny Luxembourg and neutral Ireland-have announced they will increase their defense budgets, opening the door to a potential future where Europe can theoretically afford to field the majority of the military capabilities necessary for its own self-defense.10

The need for the United States to provide precious military assets to defend Europe against Russia, support U.S. allies in Asia, and maintain other global commitments, such as in the Middle East, may put tremendous strain on the United States. Washington will therefore need more from Europe.

SUSTAINING MOMENTUM

However, the opportunity for bold action on European defense will not remain forever. Europe has many other policy priorities: post-Covid economic recovery, migration, climate change and the energy transition, and tackling inflation, to name a few. Furthermore, although NATO has seen promising further rises in defense spending since 2014, many of the announcements made since February 24 have yet to be realized. In the short run, turning those announcements into budgetary commitments is how Europe can retain forward momentum. In the long run, while these new developments are encouraging, Europeans will still face many challenges to sustain that momentum.

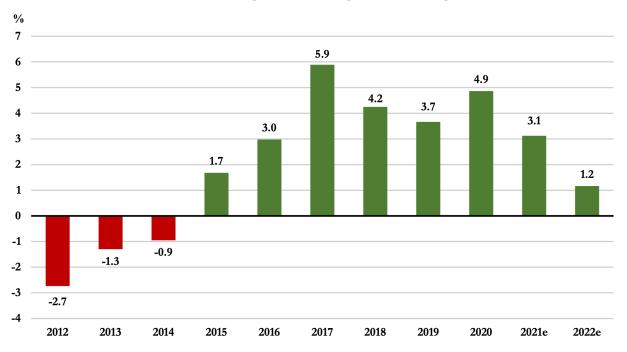
Decades of declining defense budgets have led to a dramatic downsizing of European armed forces and generated major capability gaps. Competing national defense industries and diverging operational needs have also resulted in a deeply fragmented defense landscape where cooperative solutions are an exception, not the rule. Finally, endless debates on the need for, or the danger of, more European strategic autonomy have slowed down European ambitions and are still vivid today in the context of the war in Ukraine. Having a clear understanding of these limitations is critical as Europeans think about the future of their defense.

DECADES OF UNDERINVESTMENT

Recent decisions in Europe to boost defense budgets represent good news but come after decades of budgetary cuts and anemic defense investment that has resulted in a major and lasting depreciation of European armed forces, especially compared to the Cold War period. ¹² Even though European partners started to increase their defense budgets again in 2015, (see Graph 1) primarily in reaction to Russia's invasion of Ukraine, they had dug themselves an incredibly deep hole.

Graph 1: NATO Europe and Canada - defence expenditure

(annual real change, based on 2015 prices and exchange rates)



Source: "Defence Expenditure of NATO Countries (2014-2022)," NATO Public Diplomacy Division, June 27, 2022, https:// www.nato.int/nato_static_fl2014/assets/pdf/2022/6/pdf/220627-def-exp-2022-en.pdf.

Over the last two decades, European militaries have lost 35 percent of their capabilities. 13 To take the example of European navies, European countries had almost 200 large surface combatants and 129 submarines in 1990, but only 116 and 66, respectively, in 2021.¹⁴ Europe's combat power at sea is considered to be about half of what it was during the height of the Cold War. 15 Although often justified as favoring high-tech quality over quantity, reduced operational "mass" remains concerning. For example, the war in Ukraine suggests platforms remain vulnerable in high-intensity warfare. Russia itself might attest to this: according to the Ukrainian Armed Forces, the Russian military may have lost 1,500 tanks, 3,600 armored vehicles, 750 artillery pieces, and 210 aircraft between the beginning of the invasion and the end of June.¹⁶

Declining military investments have also led to major capability gaps. As witnessed with military engagements in Afghanistan, Iraq, Libya, and the Sahel, European armed forces are still relying on U.S. support for critical enablers such as air-to-air refueling, strategic airlift, and reconnaissance and intelligence capacities. 17 The chaotic withdrawal from Afghanistan was a sobering demonstration of these limitations, as European states were incapable of evacuating their own citizens and allies without logistical support from Washington.¹⁸

The war in Ukraine offers another example of such constraints: European states have struggled to supply Ukraine with needed heavy weaponry. So far, the United States has provided most of the military assistance to Ukraine, demonstrated most recently by the adoption of a massive \$40 billion support package. 19 While Europeans have stepped up militarily, restricted stocks of equipment and ammunition are limiting their support, especially as they also have to maintain national militaries.²⁰

A FRAGMENTED DEFENSE LANDSCAPE

It is not simply that European countries are spending too little on defense, but also that they are doing so in a piecemeal way. In fact, overall European military spending is not that low. In 2020, for example, Europe collectively spent \$378 billion on defense (roughly half of total U.S. defense spending).²¹ Yet, different strategic cultures and competing defense industries have led European governments to prioritize national solutions at the expense of collective projects. As recently underlined by the European Defense Agency, EU countries conducted only 11 percent of their total equipment procurement in a European framework in 2020.²² This share is well below the 25 percent share reached in 2011 and far short of the commitment member states made in 2017 to reach 35 percent.²³

This lack of joint procurement has resulted in a fragmented defense landscape. European armed forces suffer major redundancies, with 29 different types of destroyers, 17 types of main battle tanks, and 20 types of fighter planes, as compared to four, one, and six, respectively, for the United States.²⁴ Some European countries have managed to develop joint platforms in the past, such as the A400M military transport aircraft, the Eurofighter combat aircraft, and the Tiger attack helicopter. But even these collaborative programs have not necessarily led to a rationalization of European capabilities. For instance, because of diverging operational requirements, the Tiger helicopter has been developed in four different models.²⁵

The war in Ukraine has revealed another limitation of the European defense industrial base: the attrition of its military industrial capacity.²⁶ Decades of declining defense budgets have led European countries to sacrifice scale for efficiency. As a result, they have struggled to respond to Ukraine's needs due to limited stockpiles and slow production capacities. European defense industries are also facing vulnerable supply chains, showcased by the Covid-19 pandemic, with a growing dependence on critical raw materials from international sources, including China, for certain sectors, as NATO secretary general Jens Stoltenberg cautioned at the Madrid summit.²⁷

This lack of joint procurement has resulted in a fragmented defense landscape. European armed forces suffer major redundancies, with 29 different types of destroyers, 17 types of main battle tanks, and 20 types of fighter planes, as compared to four, one, and six, respectively, for the United States.

NO CLEAR POLITICAL CONSENSUS

There are major political obstacles to rationalizing European defense. What should amount to a largely practical and pragmatic effort often descends into an ideological squabble over "strategic autonomy" or national sovereignty. Bureaucratic turf wars erupt between ministries of defense, NATO, and the European Union over roles and responsibilities. National defense industries also each have their privileged place within national capitals and push for their interests, which are often at odds with

creating a more integrated European defense landscape.

The United States can also play an obstructive role. Many European countries are reliant on U.S. security guarantees, giving the United States tremendous influence over the direction of European security.²⁸ The United States is often a vocal opponent of European defense industrial initiatives focused on integration, as they benefit European companies to the detriment of the U.S. defense industry. Moreover, the United States has opposed EU defense efforts, fearing that NATO, and therefore the United States, would lose its pride of place in the European security architecture. This has led to a recitation by many in the United States that there should be "no duplication" of NATO by the European Union. Yet concerns over "duplication" can be treated so broadly as to risk erasing any role for the European Union in defense when it in fact can play a crucial role in fostering integration, mobilizing resources, and coordinating investments.

There are also clear strategic differences within Europe. European ambitions on security and defense have often been hampered by political debates surrounding notions of European "strategic autonomy" or "sovereignty." These often passionate discussions reveal that European states disagree on the urgency for Europe to become capable of defending itself alone. There is a looming prospect of a future U.S. administration returning to an "America First" policy that relegates European security and multilateral institutions such as NATO. Paradoxically, the leadership position assumed by the United States since the beginning of the war in Ukraine has weakened the movement toward more European autonomy.30

These disputes have resulted in a Europe which still relies too much on Washington to ensure its security and defense. In a recent study called the European Sovereignty Index, the European Council on Foreign Relations underlines that "the state of European security and defense sovereignty leaves much to be desired, especially in countries seeing U.S. security guarantees as their "main form of life insurance."31

A BLUEPRINT FOR THE NEXT DECADE

These challenges to transforming European defense can be overcome. The level of ambition laid out in recent strategic documents, such as the European Union's Strategic Compass and NATO's new strategic concept, provides the requisite conceptual foundation. Practically speaking, this begins with following through on the defense spending pledges already made, but long-term success will require an ambitious vision to rationalize European defense, streamline its

many national and intergovernmental processes, eliminate redundancies, and maximize efficiency. If Europe fails to do so, it will not get full value for its investments. Charting a few key lines of effort is a useful place to start.

TOWARD JOINT PLANNING IN EUROPE

There are two levels of defense planning in Europe: national and multinational. At the national level, countries regularly produce defense strategies, which set out their national priorities for defense investment. At the multinational level, the two main efforts are NATO's defense planning process (NDPP) and the European Union's capability development process, which involves several institutions but is led by the European Defence Agency (EDA). Both identify military capability gaps and develop procurement plans to fill them. While there is some degree of synchronization between them—"ensuring the coherence and complementarity of each other's defence planning processes" has been a goal of EU-NATO cooperation since at least 2016—it has not been sufficient to prevent the fragmentation and duplication discussed above.32

A new approach that better aligns these processes and emphasizes joint development of capabilities is needed, especially for those most relevant for collective defense. The EDA is currently reviewing its Capability Development Plan, which was last updated in 2018. Promisingly, it will reportedly emphasize high-intensity warfighting scenarios and include guidance on working with NATO.³³ This is notable, as the next NDPP cycle will likely begin next year now that the political guidance from the new strategic concept has been set. This moment of simultaneous review represents an opportunity. Although existing EU-NATO formats already endeavor to "ensure the coherence of output" between the two processes by exchanging information, coordination could be more proactive, perhaps even creating mechanisms for jointly identifying potential projects, in conversation with national ministries and defense industries.34

STRENGTHENING EUROPE'S DEFENSE INDUSTRIAL **BASE**

To sustain an ambitious investment strategy, Europe needs to take a more strategic approach to its defense industrial base. The challenges in sustaining military assistance to Ukraine have shown why European force planning should drive the development of its industrial base, for example, to ensure sufficient stockpiles of weapons and spare parts.³⁵ This should also include ramping up limited defense manufacturing capacities. In the short term, Europeans

could mobilize their civilian industry to help support the defense sector; France aims to do so by emulating the U.S. Defense Priorities and Allocations System Program.³⁶ In the medium term, the European Union should invest in advanced manufacturing, from robotics to nanotechnologies to advanced materials technologies. In the longer term, they should also encourage industrial alliances or even integration to rationalize production capacity, as France and the United Kingdom have pursued in the missile sector.³⁷

European states also need to strengthen supply chain resilience. First, they should seek to diversify their supply of raw materials and components by collectively identifying alternative suppliers or substitutions. Second, the European Union should invest in domestic production of critical components, starting with semiconductors. In February 2022, the European Commission announced the European Chips Act, which aims to substantially increase chip production.³⁸ Finally, the European Union should consider joint purchasing for the most critical raw materials to help create collective strategic reserves, which it already does for gas.³⁹ Facing similar challenges, the United States and European Union should deepen their coordination on supply chain resilience using recent transatlantic working groups such as the U.S.-EU Trade and Technology Council and the U.S.-EU dialogue on security and defense.

The challenges in sustaining military assistance to Ukraine have shown why European force planning should drive the development of its industrial base, for example, to ensure sufficient stockpiles of weapons and spare parts.

Transatlantic coordination is also required to build the strong and sustainable defense and technology industrial base needed to underpin the long-term strategic advantage of NATO and the European Union. There are several fissures in transatlantic defense industrial policy that have the potential to, as one recent CEPS study puts it, "sorely undermine transatlantic unity."40 These include Europe's tendency to excessively buy non-European equipment, the controversial issue of non-EU third-party participation in joint EU capability initiatives, and export, technology, and intellectual property controls on both sides of the Atlantic that risk creating competing, rather than complementary, industrial bases. 41 These potential pitfalls need to be

addressed if the Euro-Atlantic community is to maintain the open, thriving ecosystem of technology and innovation it needs to stay competitive.

CATALYZING JOINT DEVELOPMENT AND PROCUREMENT

While many European countries have decided to raise defense spending in response to Russia's war against Ukraine, there are concerns that this will not translate into coordinated and coherent investments.⁴² This is where the European Union has an instrumental role to play in encouraging its members to jointly develop and procure defense capabilities. Fortunately, EU countries have already created promising tools to foster such a collaborative approach, such as the Permanent Structured Cooperation and the European Defense Fund, which has been allocated €8 billion (\$8.3 billion) for 2021 to 2027.⁴³ The European Commission has also recently announced an even more innovative program of €500 million (\$507 million) to incentivize EU members to pursue joint procurement.⁴⁴

EU countries should not only fully leverage these tools but also expand their financial scope given the huge needs going forward. The €8 billion defense fund and the €500 million joint procurement program are a good start but are clearly insufficient to answer the immense investment needs. Furthermore, the joint procurement program still needs to get off the ground. 45 Following the model of the €750 billion (\$760.5 billion) Next Generation EU recovery plan, the European Commission could borrow on capital markets to either support collaborative investments or pursue joint procurements on behalf of member states. 46 NATO's common funding and new innovation fund could also contribute these much-needed investments.⁴⁷ Increasing NATO's common funding was discussed in the leadup to the Madrid summit but had limited follow-through in the strategic concept.48

These coordinated investments should focus on high-end capabilities, building on existing projects such as a 15-nation effort to develop a new ground-based air defense system by 2028, the French-German-Spanish next-generation fighter program, and the Italian-led project to develop a new armored fighting vehicle.⁴⁹

THINKING CREATIVELY TO POOL AND SHARE FORCES

Another potential avenue for rationalizing European defense is via initiatives that pool and share national forces under a multinational command. A few examples can already be found in Europe. One of the oldest is the Benelux naval

integration, under which the Belgian and Dutch navies operate under the commander of the Royal Netherlands Navy, who receives the title of Admiral Benelux. 50 Another example is the European Air Transport Command (EATC), a program under which seven Western European countries pool military air mobility assets for air transport and air-to-air refueling under a single joint command. 51 The new Franco-German tactical air transport squadron will fly missions for the EATC. 52 Countries benefit from these arrangements in situations where their individual capacities are insufficient to meet some threshold for reliable operational success. These initiatives also increase interoperability through joint training and exercising. Such efforts may seem niche and technical, but in fact

represent a symbolic concession in a core area of national sovereignty. In these cases, as when they commit troops to NATO operations, nations decide if the security benefits outweigh any political costs. It should be noted that this concept is not new: the European Union has championed "pooling and sharing" since 2012, while NATO has focused on "Smart Defence" to achieve "greater security, for less money, by working together with more flexibility."53 Both initiatives have had mixed results. Nonetheless, European countries should make a concerted effort, perhaps led by defense planners at the NATO or EU level, to explore new initiatives along these lines. Any new arrangements could constitute a new tool in NATO's tool kit. In order to make this happen, European governments may have to make the strategic case to their own citizens that a trade-off in terms of sovereignty is worth the associated cost savings and the likely increase of overall European security.

A PUSH FROM WASHINGTON?

If European defense is to be rationalized along some of these lines, the United States will need to play a critical role. For years, the United States has led a cadre of European nations that are critical or at least skeptical of EU ambitions to increase its capacity as a defense actor. The main fear has been the "Three Ds" of "decoupling, duplication, and discrimination."54 Essentially, the United States and others are worried that unfettered EU defense and security initiatives could siphon resources and attention away from NATO. This fear of decoupling and duplication still manifests in many major documents, such as the most recent progress report on EU-NATO cooperation or the new NATO strategic concept.55 The fear of discrimination is present in debates about divergence in the transatlantic industrial base and the alleged exclusion of third parties from joint capability and procurement

initiatives. It is time to rethink some of these assumptions.

Most would agree that it is in the U.S. interest for Europe to be able to defend itself to the greatest degree possible without a large U.S. military commitment. As the late Madeline Albright wrote: "Our interest is clear: we want a Europe that can act. We want a Europe with modern, flexible military forces that are capable of putting out fires in Europe's backyard and working with us through the alliance to defend our common interests. European efforts to do more for Europe's own defence make it easier, not harder, for us to remain engaged."56 America's recipe for getting this done was to focus on "enhancing the practical capabilities Europe brings to our alliance."57

Yet this focus on the practical over the political led to a paradox in European defense: progress on practical capabilities could only go so far in the absence of political support for their development and use. The capability gaps, fragmentation, and inefficiencies in European defense are as much due to political imperatives—to avoid the "Three Ds" as they are down to insufficient investment, modernization, and institutional initiatives.

It is therefore time for the Biden administration, and future administrations, to find a new recipe for transforming European defense to achieve Albright's goal of "a Europe that can act." Several questions can serve as a starting point. First, how can the United States help Europe generate the practical capabilities and political support it needs to defend itself? This could be done through several avenues including NATO, the European Union, and mini- and bilateral frameworks, but it must be coordinated and consistent. Second, how can a balance be struck between the risk of duplication versus the risk of fragmentation and capability gaps? Third, what is the role of the European Union in stepping up as an engine of joint procurement for the most vital and expensive systems and high-end capabilities?

A STRONGER, MORE CAPABLE EUROPEAN **DEFENSE**

The United States spent the last decade urging European states to spend 2 percent of their GDP on defense. Now that European partners are spending more, the United

States should become the most forceful advocate for transforming European defense. The United States' role as the key guarantor of European security puts it in a privileged position. This is especially true for the most vulnerable NATO allies on the eastern flank, all of whom are also EU members and therefore in a position to block or water down EU initiatives. It follows that Washington's support for EU defense proposals can play a major role in determining their fate. After years of urging European allies to spend more on defense, a new diplomatic initiative is needed that does not waste the urgency that Russia's war in Ukraine created.

Washington should encourage European countries to leverage the European Union, NATO, and other, flexible formats to rationalize the fragmented defense and industrial landscape by investing together in modern capabilities, building a strong and resilient industrial base, and thinking creatively to pool and share forces. To make this happen, the United States must provide practical and political support, including through encouraging the European Union's ambitions and assuring eastern allies that those ambitions do not reduce U.S. commitment to their defense through NATO—which, it should be noted, the European Union's own strategic compass still recognizes as the "foundation of collective defence for its [EU] members."58 When combined with some of the initiatives proposed above, this active support from the United States could kickstart a new era of European defense and achieve the shared goal of "a stronger and more capable European defense, that contributes positively to transatlantic and global security."59

Max Bergmann is the director of the Europe Program at the Center for Strategic and International Studies (CSIS) in Washington, D.C. **Pierre Morcos** is a visiting fellow with the CSIS Europe, Russia, and Eurasia Program. Colin Wall is a research associate with the CSIS Europe, Russia, and Eurasia Program. Sean Monaghan is a visiting fellow with the CSIS Europe, Russia, and Eurasia Program.

This brief is made possible by CSIS's Strategic Investment Fund and generous support from the British Defence Staff (United States).

CSIS BRIEFS are produced by the Center for Strategic and International Studies (CSIS), a private, tax-exempt institution focusing on international public policy issues. Its research is nonpartisan and nonproprietary. CSIS does not take specific policy positions. Accordingly, all views, positions, and conclusions expressed in this publication should be understood to be solely those of the author(s). © 2022 by the Center for Strategic and International Studies. All rights reserved.

Cover Photo: JOHN THYS/AFP/Getty Images

ENDNOTES

- 1 "Anyone Can Die at Any Time': Indiscriminate attacks by Russian forces in Kharkiv, Ukraine," Amnesty International, June 13, 2022, https://www.amnesty.org/en/latest/research/2022/06/anyone-candie-at-any-time-kharkiv/.
- "Wales Summit Declaration," NATO, September 5, 2014, last updated July 4, 2022, para. 1, https://www.nato.int/cps/en/natohq/official_ texts 112964.htm.
- Seth Jones, Rachel Ellehuus, and Colin Wall, Europe's High-End 3 Military Challenges: The Future of European Capabilities and Missions (Washington, DC/Lanham, MD: CSIS/Rowman & Littlefield, November 2021), https://www.csis.org/analysis/europes-high-endmilitary-challenges-future-european-capabilities-and-missions.
- Pierre Morcos and Colin Wall, "Are European Navies Ready for High-Intensity Warfare?," War on the Rocks, January 31, 2022, https:// warontherocks.com/2022/01/are-european-navies-ready-for-highintensity-warfare/.
- "NATO 2022 Strategic Concept," NATO, June 29, 2022, https://www. 5 nato.int/nato_static_fl2014/assets/pdf/2022/6/pdf/290622-strategicconcept.pdf.
- "Fact Sheet: 2022 National Defense Strategy," U.S. Department of Defense, March 28, 2022, https://media.defense.gov/2022/ Mar/28/2002964702/-1/-1/1/NDS-FACT-SHEET.PDF.
- European Commission, "Ukraine: €3.4 billion REACT-EU pre-7 financing to Member States welcoming refugees fleeing Ukraine," Press release, March 23, 2022, https://ec.europa.eu/commission/ presscorner/detail/en/ip_22_1961.
- European External Action Service, A Strategic Compass for Security and Defense (Brussels: European Union, March 2022), https://www. eeas.europa.eu/node/106337_fr.
- 9 Sean Monaghan, Pierre Morcos, and Colin Wall, "What Happened at NATO's Madrid Summit?," CSIS, Critical Questions, July 1, 2022, https://www.csis.org/analysis/what-happened-natos-madrid-
- Holger Hansen, "German lawmakers approve 100 billion euro military revamp," Reuters, June 3, 2022, https://www.reuters.com/ world/europe/german-lawmakers-approve-100-bln-euro-militaryrevamp-2022-06-03/; Yannick Lambert, "Luxembourg to double defence spending by 2028," Luxembourg Times, June 24, 2022, https:// www.luxtimes.lu/en/luxembourg/luxembourg-to-increase-defencespending-by-2028-62b5739cde135b9236c55bc6; and Martin Wall and Conor Gallagher, "Ireland's defence spending set to rise by at least 50%, says Coveney," Irish Times, April 28, 2022, https:// www.irishtimes.com/news/ireland/irish-news/ireland-s-defencespending-set-to-rise-by-at-least-50-says-coveney-1.4864427.
- "Defence Expenditures of NATO Countries (2014-2022)," NATO, June 27, 2022, https://www.nato.int/cps/en/natohq/news_197050.
- Pierre Morcos, "Toward a New 'Lost Decade'? Covid-19 and Defense Spending in Europe," CSIS, CSIS Brief, October 15, 2020, https://www. csis.org/analysis/toward-new-lost-decade-covid-19-and-defensespending-europe.
- Christian Mölling, Torben Schütz, and Sophia Becker, "Deterrence and Defense in Times of COVID-19: Europe's Political Choices," German Council on Foreign Relations, April 9, 2020, https://dgap. org/en/research/publications/deterrence-and-defense-timescovid-19.

- Morcos and Wall, "Are European Navies Ready for High-Intensity Warfare?."
- 15 David Larter, "With challenges aplenty, Europe's navies are coming to grips with high-end warfare," Defense News, June 22, 2020, https:// www.defensenews.com/smr/transatlantic-partnerships/2020/06/22/ with-challenges-aplenty-europes-navies-are-coming-to-grips-withhigh-end-warfare/.
- Cédric Pietralunga and Elise Vincent, "Will the Russian army be able to sustain a long conflict in Ukraine," Le Monde, June 27, 2022, https://www.lemonde.fr/en/international/article/2022/06/27/willthe-russian-army-be-able-to-sustain-a-long-conflict-in-ukraine-itsresilience-is-still-an-open-question_5988065_4.html.
- 17 Jones, Ellehuus, and Wall, Europe's High-End Military Challenges.
- Rachel Ellehuus and Pierre Morcos, "Fall of Kabul: Inconvenient 18 Truths for NATO," CSIS, Commentary, August 27, 2021, https://www. csis.org/analysis/fall-kabul-inconvenient-truths-nato.
- Mark F. Cancian, "What Does \$40 Billion in Aid to Ukraine Buy," CSIS, Commentary, May 23, 2022, https://www.csis.org/analysis/ what-does-40-billion-aid-ukraine-buy.
- Max Bergmann and Naz Gocek, "Europe Needs Its Own Ukraine Assistance Act," CSIS, Commentary, June 24, 2022, https://www.csis. org/analysis/europe-needs-its-own-ukraine-assistance-act.
- Diego Lopes da Silva, Nan Tian, and Alexandra Marksteiner, "Trends in World Military Expenditure, 2020," Stockholm International Peace Research Institute, April 2021, https://sipri.org/sites/default/ files/2021-04/fs_2104_milex_0.pdf
- European Defense Agency, Defense Data 2019-2020 (Brussels: European Defense Agency, 2021), https://eda.europa.eu/docs/ default-source/brochures/eda---defence-data-report-2019-2020.pdf.
- Elena Lazarou and Alina Dobreva, "Security and defense," European Parliament, June 2019, https://www.europarl.europa.eu/RegData/ etudes/BRIE/2019/635533/EPRS_BRI(2019)635533_EN.pdf.
- European Commission, Reflection Paper on the Future of European Defence (Brussels: European Commission, June 2017), https:// ec.europa.eu/info/sites/default/files/reflection-paper-defence_ en.pdf.
- Peter Suciu, "One Killer Helicopter: Meet Europe's Flying Tiger HAP," National Interest, December 25, 2020, https://nationalinterest. org/blog/buzz/one-killer-helicopter-meet-europe's-flying-tigerhap-175210.
- Alex Vershinin, "The Return of Industrial Warfare," Royal United Services Institute, Commentary, June 17, 2022, https://rusi.org/ explore-our-research/publications/commentary/return-industrialwarfare.
- S. Bobba et al., Critical Raw Materials for Strategic Technologies and Sectors in the EU: A Foresight Study (Luxembourg: Publications Office of the European Union, 2020), https://rmis.jrc.ec.europa.eu/uploads/ CRMs_for_Strategic_Technologies_and_Sectors_in_the_EU_2020.pdf; and Jens Stoltenberg, "Opening speech" (speech, High-Level Dialogue on Climate and Security, NATO Public Forum, July 28, 2022), https:// www.nato.int/cps/en/natohq/opinions_197168.htm.
- German Marshall Fund (GMF) and Bertelsmann Foundation, 2021 Transatlantic Trends: Transatlantic opinion on global challenges (Washington, DC: GMF and Bertelsmann Foundation, June 2021), https://www.gmfus.org/sites/default/files/2021-08/TT2021_Web_ Version.pdf.

- Claudia Major and Christian Mölling, "Less Talk, More Action," International Politik Quarterly, No. 3 (December 2, 2020), https://ipquarterly.com/en/less-talk-more-action.
- Nicholas Lokker et al., "Evolving Dynamics Within the Bloc, with Pierre Morcos and Jeremy Shapiro," Center for New American Security, June 10, 2022, https://www.cnas.org/publications/podcast/ evolving-dynamics-within-the-bloc-with-pierre-morcos-and-jeremy-
- Jana Puglierin and Pawel Zerka, eds., European Sovereignty Index 31 (London: European Council on Foreign Relations and Stiftung Mercator, June 2022), https://ecfr.eu/special/sovereignty-index/.
- "Relations with the European Union," NATO, last updated July 26, 2022, https://www.nato.int/cps/en/natohq/topics_49217.htm.
- Sebastien Sprenger, "Nations huddle to clarify access rules for \$523 million buy-European fund," Defense News, June 14, 2022, https:// www.defensenews.com/digital-show-dailies/eurosatory/2022/06/14/ nations-huddle-to-clarify-access-rules-for-523-million-buyeuropean-fund/.
- "Seventh progress report on the Implementation of the common set of proposals endorsed by EU and NATO Councils on 6 December 2016 and 5 December 2017," European Union and NATO, June 20, 2022, https://www.nato.int/nato_static_fl2014/assets/pdf/2022/6/ pdf/220620-progress-report-nr7-EU-NATO-eng.pdf.
- Anthony H. Cordesman, "NATO Force Planning: Rethinking the Defense Industrial Base," CSIS, Commentary, July 19, 2022, https:// www.csis.org/analysis/nato-force-planning-rethinking-defenseindustrial-base.
- Jean-Michel Bezat, Cédric Pietralunga, and Elise Vincent, "Le ministère de la défense réfléchit à réquisitionner du matériel du secteur civil pour refaire ses stocks d'armes" [The Ministry of Defense considers requisitioning equipment from the civilian sector to replenish its arms stocks], Le Monde, June 13, 2022, https://www. lemonde.fr/international/article/2022/06/13/defense-le-ministerereflechit-a-requisitionner-le-secteur-civil-pour-refaire-ses-stocks-darmes_6130033_3210.html; and "Defense Priorities and Allocations System Program (DPAS)," Bureau of Industry and Security, U.S. Department of Commerce, accessed July 28, 2022, https://www.bis. doc.gov/index.php/other-areas/strategic-industries-and-economicsecurity-sies/defense-priorities-a-allocations-system-program-dpas.
- Pierre Morcos and Rachel Ellehuus, "Sticking Together or Drifting Apart: the Future of Franco-British Defense Cooperation," CSIS, Commentary, October 28, 2020, https://www.csis.org/analysis/ sticking-together-or-drifting-apart-future-franco-british-defensecooperation.
- Jillian Cota, "The European Chips Act: A Strategy to Expand Semiconductor Production Resiliency," CSIS, Perspectives on Innovation Blog, March 7, 2022, https://www.csis.org/blogs/ perspectives-innovation/european-chips-act-strategy-expandsemiconductor-production-resiliency.
- Kate Abnett, "EU to propose joint gas buying in response to high energy prices - document," Reuters, December 13, 2021, https:// www.reuters.com/markets/commodities/eu-propose-joint-gasbuying-response-high-energy-prices-document-2021-12-13/.
- Michael J. Mazarr and Daniel Fiott, "Solid foundation, rocky future?," CEPS, July 18, 2022, https://www.ceps.eu/ceps-publications/solidfoundation-rocky-future/.
- "Europe's defense sector: will war in Ukraine transform its fortunes," Financial Times, July 17, 2022, https://www.ft.com/ content/0a917386-7a62-4e4a-9b89-123933f750a6.

- Felix Arteaga et al., "To Face the Russian Threat, Europeans Need to Spend Together, Not Side By Side," Armament Industry European Research Group, April 19, 2022, https://www.iris-france.org/wpcontent/uploads/2022/04/ARES_tribune_april2022_EN.pdf.
- 43 "European Defence Fund," European Commission, accessed August 5, 2022, https://defence-industry-space.ec.europa.eu/eu-defenceindustry/european-defence-fund-edf_en.
- "European Commission calls for joint procurement in defence and strengthening the defence industrial base," European Commission, May 18, 2022, https://defence-industry-space.ec.europa.eu/ european-commission-calls-joint-procurement-defence-andstrengthening-defence-industrial-base-2022-05-18_en.
- Sprenger, "Nations huddle to clarify access rules for \$523 million buy-European fund."
- Max Bergmann and Benjamin Haddad, "Europe Needs To Step 46 Up on Defense," Foreign Affairs, November 18, 2021, https://www. foreignaffairs.com/articles/europe/2021-11-18/europe-needsstep-defense; and Max Bergmann and Pierre Morcos, "The Hour of Europe?," CSIS, Commentary, May 2, 2022, https://www.csis.org/ analysis/hour-europe; Max Bergamnn and Naz Gocek, "Europe Needs Its Own Ukraine Assistance Act," CSIS, Commentary, June 24, 2022, https://www.csis.org/analysis/europe-needs-its-own-ukraineassistance-act.
- Monaghan, Morcos, and Wall, "What Happened at NATO's Madrid Summit."
- 48 "NATO 2022 Strategic Concept," NATO.
- Vivienne Machi, "NATO gears up to launch new air defense programs in 2023," Defense News, June 7, 2022, https://www. defensenews.com/global/europe/2022/06/07/nato-gears-up-tolaunch-new-air-defense-programs-in-2023/; Tangi Salaün, "France, Germany and Spain strike deal over joint combat jet," Reuters, May 17, 2021, https://www.reuters.com/business/aerospacedefense/france-germany-spain-strike-deal-over-joint-combatjet-2021-05-17/; and Tom Kington, "Italy nurses EU plans for a common armored fighting vehicle," Defense News, June 7, 2022, https://www.defensenews.com/global/europe/2022/06/07/italynurses-eu-plans-for-a-common-armored-fighting-vehicle/.
- "The Belgian and Netherlands navies under 1 command," Dutch Ministry of Defense, accessed July 28, 2022, https://english.defensie. nl/topics/international-cooperation/other-countries/the-belgianand-netherlands-navies-under-1-command.
- "The member nations," European Air Transport Command, accessed July 28, 2022, https://eatc-mil.com/en/who-we-are/the-membernations.
- Nichola Fiorenza, "Franco-German transport squadron officially established," Janes, September 2, 2021, https://www.janes.com/ defence-news/news-detail/franco-german-transport-squadronofficially-established.
- "EDA's Pooling & Sharing," European Defense Agency, January 30, 2013, https://eda.europa.eu/docs/default-source/eda-factsheets/ final-p-s_30012013_factsheet_cs5_gris; and "NATO Secretary General calls for 'Smart Defence' at Munich Conference," NATO, February 5, 2011, https://www.nato.int/cps/en/natohq/news_70327. htm?selectedLocale=en.
- Madeleine K. Albright, "The Right Balance Will Secure NATO's Future," Financial Times, December 7, 1998, https://www.jstor.org/ stable/resrep06989.8?seq=1.
- "Seventh progress report on the implementation of the common set of proposals endorsed by EU and NATO Councils on 6 December

- 2016 and 5 December 2017," European Union and NATO.
- Albright, "The Right Balance Will Secure NATO's Future." 56
- 57 Albright, "The Right Balance Will Secure NATO's Future."
- European External Action Service, A Strategic Compass for Security 58 and Defense.
- "Joint Statement on the Phone Call between President Macron," The White House, September 22, 2021, https://www.whitehouse.gov/ briefing-room/statements-releases/2021/09/22/joint-statement-onthe-phone-call-between-president-biden-and-president-macron/.