

**OCCASIONAL PAPER – No. 02/2026**

# **Consumer Protection in the Age of AI: Transposing the New EU Product Liability Directive in Sweden, Denmark, and Finland**

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This report was commissioned by the European Justice Forum, a coalition of businesses, individuals and organisations that are working to build fair, balanced, transparent and efficient civil justice laws and systems for both consumers and businesses in Europe.

## FOREWORD BY FREDRIK REINFELDT

Sweden and the Nordic countries have relatively small, open and research-intensive economies. Our long-term prosperity depends on competitiveness, innovation and institutional stability. Legal predictability is not a peripheral issue in this context – it is one of the conditions that allows firms to invest, take appropriate risks and develop new products.

The revised EU Product Liability Directive represents a substantial update of European liability rules. By extending strict liability to software, digital services and artificial intelligence systems, it reflects the reality that value creation is increasingly digital and intangible. Modernisation of consumer protection is necessary as technologies evolve. However, legal change should always be balanced and take account of economic realities.

The Nordic economies are among the most research-intensive in Europe. Sweden's R&D expenditure is approximately 3.4 per cent of GDP, with Denmark and Finland also ranking near the top within the EU. A considerable share of national value added and exports derives from sectors such as pharmaceuticals, medical technology, telecommunications, industrial innovation and advanced digital services. These industries rely on long-term investment cycles, high fixed development costs and complex cross-border supply chains.

Liability frameworks influence how risk is assessed by companies during their strategic planning, especially in these innovative sectors. When legal exposure becomes more uncertain or more extensive, firms respond by adjusting capital allocation, compliance, testing and documentation processes, insurance coverage and, in some cases, the location of research and development activities. Over time, even incremental shifts in expected costs from increased legal exposure can alter the competitive position of a region.

The analysis in this report makes the point clearly. Under higher-litigation scenarios, leading Nordic firms could face valuation effects measured in several billions of euros. The modelling is not intended to predict precise outcomes, but to show that increased litigation exposure – particularly when added to already significant regulatory compliance costs – has measurable economic consequences. For innovation-driven economies, this is not a theoretical risk.

It is important to also recognise that the Nordic countries already operate well-established systems that ensure high levels of consumer protection including redress for any harm that has been incurred. Independent regulators, Ombudsmen and alternative dispute resolution mechanisms form the backbone of these systems. They are widely trusted and have historically resolved disputes efficiently without relying on large-scale litigation as an enforcement tool. Consumer satisfaction and institutional trust in the region remain high by European and even global standards.

This context matters. Implementation of the Directive should prevent legal uncertainty by avoiding overlap with existing regulations, for example, in the digital and data protection spaces or with sectoral legislation such as the Medical Devices Regulation. If new rules combine with expanded litigation mechanisms to create incentives for higher volumes of collective or funded claims, the result would not simply be procedural change. It would alter the incentive structure for firms operating in research-intensive sectors.

Strengthening consumer protection and preserving economic competitiveness are not mutually exclusive goals. But maintaining this balance requires careful calibration of any new rights and remedies. Questions of proportionality, clarity in causation standards, preservation of established rights of defence and coherence with other EU regulatory frameworks are all relevant to how the Directive will function in practice. These and other questions that have been left open by the new PLD, could be usefully clarified by the EU Commission in interpretive guidance to ensure more consistent implementation by the Member States and to prevent fragmentation of the Single Market.

For Sweden and the Nordic countries, maintaining competitiveness remains central to economic policy. In an environment of intensifying global technological competition, regulatory design should support innovation rather than introduce avoidable uncertainty and prevent exposure of companies to costly mass claims based on weak evidence.

This study contributes empirical evidence to a discussion that should be conducted in economic as well as legal terms. The objective is not to resist reform but to ensure that any reform is implemented in a balanced way that reflects national strengths and sustains long-term growth.

**Fredrik Reinfeldt**

Former Prime Minister of Sweden

## EXECUTIVE SUMMARY

Digital technologies and artificial intelligence (AI) are transforming Europe's economy. The legal frameworks designed to govern them are catching up – perhaps too hastily. The EU's revised Product Liability Directive (PLD) provides a good example of the tension between the speed of technological progress and the need for norms that balance the rights and obligations of users and producers of these technologies.

The PLD seeks to modernise product liability rules by recognising that software, AI systems and connected devices are now integral to everyday products and services. For the first time, digital manufacturing files, algorithms and software fall within the scope of strict liability, meaning that producers can be held responsible for harm caused by defects in code or data as much as by flaws in hardware.

While well-intentioned, the Directive risks imposing heavy economic costs, particularly in countries whose competitiveness depends on digital innovation. Expanding liability may discourage companies from experimenting or launching new products as even routine design improvements could be construed as evidence of past defects. Faced with greater legal uncertainty, firms are likely to divert resources from research and development into compliance documentation, testing and risk management in order to minimise litigation exposure.

For Denmark, Finland and Sweden – among the world's most digitalised and research-intensive economies – the stakes are high. Scenario analysis suggests that if the PLD were to encourage mass litigation and if this reached even a fraction of United States levels, the combined market value of their most innovative firms could fall by between €2 billion and €7 billion, equivalent to several years of public R&D spending. Technology-intensive sectors such as ICT and life sciences would bear the brunt of this impact, with potential knock-on effects for GDP and employment across the Nordic economies.

The new PLD continues a broader EU trend of favouring private regulatory enforcement through the courts, rather than the traditional model of public oversight that has been the preferred model in Europe, and especially in the Nordics. This shift marks a departure from the Nordic region's tried and tested approach where public regulators and other public authorities, including Ombudsmen, resolve disputes efficiently and at low cost. If transposed without regard for this well-established model, the PLD could erode not only innovation-driven growth in the Nordic countries but also the foundations of their existing consumer protection systems.

Nordic policymakers should shape the PLD to fit their own systems, ensuring that national implementation preserves the strengths of their regulatory traditions. This study outlines the following recommendations:

- **Transpose the PLD with caution.** Nordic governments should implement the Directive in line with existing procedural frameworks and avoid a simple copy-and-paste of the directive.

- **Seek Interpretive Guidance from the European Commission.** PLD's regulatory complexity runs contrary to the EU's goals of simplification and economic competitiveness. Nordic governments should lead a joint initiative to request formal interpretive guidance from the Commission. Such guidance is essential to ensure a consistent and harmonised application of the Directive across the Single Market, clarify ambiguous terms, prevent unintended consequences, and protect against litigation abuses.
- **Clarify the application of new legal principles.** Legislators should specify how and when courts are to apply the new presumptions brought in by PLD and establish clear and rigorous standards for disclosure of evidence based on existing rules. The presumptions introduced in the PLD should be integrated carefully within the laws in the Nordic countries and interpreted narrowly, in keeping with the EU's intent that there should be no reversal of the burden of proof.
- **Clarify liability boundaries for digital and AI technologies.** National guidance and sector-specific standards should define how liability applies to software, AI systems, and connected devices, especially where responsibility is shared across supply chains or evolves through updates.
- **Preserve proportionality and retain the development-risk defence.** The development risk clause should be maintained to prevent liability for defects that could not have been detected with existing scientific and technical knowledge at the time of production.
- **Ensure coherence across the regulatory landscape.** The PLD's implementation should align with existing frameworks on data protection, cybersecurity, and digital services to avoid duplication, legal uncertainty, and conflicting enforcement.
- **Maintain the Ombudsman-centred model for consumer redress.** The Nordic tradition of public oversight and accessible dispute resolution should remain the primary mechanism for enforcement, with litigation reserved only for systemic failures. This approach has long safeguarded both consumer trust and innovation at a fraction of the cost of mass litigation seen in other countries.

## LIST OF ACRONYMS

**ADR** – Alternative Dispute Resolution

**AI** – Artificial Intelligence

**ARN** – Allmänna Reklamationsnämnden

**DMA** – Digital Markets Act

**FCCA** – Finnish Competition and Consumer Authority

**GDPR** – General Data Protection Regulation

**ICT** – Information and Communication Technologies

**IMY** – Swedish Authority for Privacy Protection

**IVDR** – In Vitro Diagnostic Medical Devices Regulation

**KRL** – Kuluttajariitalautakunta

**MDR** – EU Medical Device Regulation

**PFAS** – Per- and polyfluoroalkyl substances

**PLD** – Product Liability Directive

**PPE** – Personal Protective Equipment

**RAD** – Representative Action Directive

**R&D** – Research and Development

**xG** – Next-Generation networks

# 1. INTRODUCTION

Digital technologies, and increasingly artificial intelligence (AI) shape many of our everyday activities. While these tools promise efficiency and convenience, they also bring potential challenges such as hidden defects in code that can compromise product safety, data breaches that can lead to security vulnerabilities, or algorithmic biases that can produce discriminatory outcomes. Because individuals cannot easily detect or control these risks, consumer protection law plays a crucial role in ensuring safety and accountability.

As part of a broader overhaul, the EU's revised Product Liability Directive (PLD) updates the liability rules in the EU for the digital age. However, the PLD also introduces sweeping reforms that tilt the balance of risk between litigants significantly in favour of the claimant. These changes, coupled with the Representative Actions Directive (RAD), will further encourage the spread of mass litigation in the EU.<sup>1</sup>

For highly digitalised economies such as Denmark, Finland, and Sweden (see Annex 2), these developments pose particular challenges. The Nordic countries<sup>2</sup> rely heavily on intangible investments such as data, software and patents, making them especially sensitive to policies that can hinder digital innovation.<sup>3</sup> This is the case of the new PLD. For example, strict liability can penalise digital firms for iterative improvements since design changes may be cited in litigation as evidence of prior defects. For national and local authorities, the PLD could expose the public sector and their vendors to liability when delivering public services using digital means such as national identity systems, electronic health records, or algorithmic welfare services, and as a result, potentially hamper the roll-out of vital public services.

Moreover, the introduction of the PLD could undermine the current system of consumer protection that operates in the Nordic countries. Citizens in Denmark, Finland and Sweden are protected by a solid framework of laws, agencies and Ombudsmen. Rather than relying on litigation, the Nordic countries combine guidance with ex-post remedies. This model helps firms comply proactively and provides effective and efficient redress mechanisms. In addition, the EU maintains one of the world's most rigorous product-safety regimes through detailed conformity-assessment procedures, CE marking, and sector-specific legislation. These ex-ante mechanisms are designed to prevent harm before it occurs, helping to explain why relatively few product liability cases arise under the current framework.

This study argues that, in order to maintain their economic competitiveness and preserve the qualities of their existing consumer protection models, Nordic policymakers should transpose the new PLD with caution. Chapter 2 explains the Nordic model of consumer protection and

<sup>1</sup> Under Annex I of the Representative Actions Directive (RAD), which lists the Union law provisions referred to in Article 2(1), the Product Liability Directive (PLD) is included. This means that infringements of rights or obligations arising under the PLD, including those provisions as transposed into national law, fall within the scope of RAD.

<sup>2</sup> When the study refers to the Nordic countries, it means the EU Nordics, i.e., Sweden, Finland, and Denmark, and does not include Norway or Iceland.

<sup>3</sup> The Nordic countries rank among the world's most innovative economies. According to the World Intellectual Property Organization's Global Innovation Index 2025, Sweden, Finland and Denmark are ranked 2nd, 7th, and 9th globally. See: World Intellectual Property Organization (2025). Global Innovation Index 2025. Available at: <https://www.wipo.int/web-publications/global-innovation-index-2025/assets/80937/global-innovation-index-2025-en.pdf>

the role of Ombudsmen. Chapter 3 reviews the PLD's shortcomings, in particular for digital and AI products. Chapter 4 considers the likely growth of collective actions as a result of the implementation of the PLD and the potential consequences for the Nordic region's most innovative companies. Chapter 5 offers recommendations for adapting the PLD to the Nordic model.

## **2. THE NORDIC MODEL OF CONSUMER PROTECTION**

### **2.1 Public Versus Private Regulatory Enforcement**

Regulatory enforcement in the Nordic countries, as in much of the EU, uses a public enforcement-based model. In this system, rules are clear and prescriptive, describing in detail what companies may and may not do and the procedures they must follow.

In certain sectors, regulatory compliance involves collaboration between companies and designated public authorities, providing assurance that when a product is placed on the market it has met all the relevant safety standards. Regulatory bodies also actively monitor markets for potential safety risks or legal breaches. This is a distinctive feature of public enforcement in the Nordics where the focus is on prevention, for example, by reviewing contract terms, issuing advance opinions, or negotiating standards with the relevant trade associations or other industry bodies.<sup>4</sup>

Public regulatory enforcement also reflects one of the Nordic region's most distinctive features: its high levels of public trust. According to the OECD,<sup>5</sup> citizens in Denmark, Finland and Sweden rank among the most trusting of their governments and public institutions.<sup>6</sup> This widespread institutional trust is also reflected in the World Justice Project (WJP) rule of law index, which ranks Denmark, Finland and Sweden 1st, 3rd and 4th respectively out of 142 countries for overall rule of law and absence of corruption.<sup>7</sup>

Alongside public enforcement, the Nordics also apply private collective enforcement in courts,<sup>8</sup> enabling claimants to represent groups and avoid duplicative litigation.<sup>9</sup> The role of private enforcement is as yet limited in the Nordics but is being boosted by EU legislation. First, the implementation of the RAD required all EU countries to provide mechanisms for collective redress in consumer protection cases. Second, EU laws such as the General Data Protection

<sup>4</sup> Thomsen, S. (2016). Nordic corporate governance revisited. *Nordic Journal of Business*, 65(1). Available at: <http://njb.fi/wp-content/uploads/2016/03/Thomsen.pdf>

<sup>5</sup> OECD (2024) Survey on Drivers of Trust in Public Institutions – 2024 Results. Available at: [https://www.oecd.org/en/publications/oecd-survey-on-drivers-of-trust-in-public-institutions-2024-results\\_ga20554b-en.html](https://www.oecd.org/en/publications/oecd-survey-on-drivers-of-trust-in-public-institutions-2024-results_ga20554b-en.html)

<sup>6</sup> Compared to the OECD average of 39 per cent, 47 per cent of Finnish, 44 of Danish, and 43 per cent of Swedish declared to have high level of trust in their national governments. *Ibid*

<sup>7</sup> The WJP Rule of Law Index 2024 report presents information on eight composite factors that are further disaggregated into 44 specific sub-factors. The country scores and rankings presented in this report are built from more than 500 variables resulted from assessments over 214,000 households and 3,500 legal practitioners and experts in 142 countries and jurisdictions. The overall index score is based on eight equally weighted factors, each ranked on a scale from 0 to 1: (1) constraints on government powers, (2) absence of corruption, (3) open government, (4) fundamental rights, (5) order and security, (6) regulatory enforcement, (7) civil justice, and (8) criminal justice. Together, these components form the basis of a country's overall rule of law ranking.

<sup>8</sup> Stadler, A. (2021) Are Class Actions Finally (Re)conquering Europe? Available at: [https://www.juridicainternational.eu/public/pdf/ji\\_2021\\_30\\_14.pdf](https://www.juridicainternational.eu/public/pdf/ji_2021_30_14.pdf)

<sup>9</sup> Coffee, J. C. (2015). *Entrepreneurial litigation: its rise, fall, and future*. Harvard University Press.

Regulation (GDPR) and the Digital Markets Act (DMA) explicitly provide consumers with direct rights to bring collective actions. Third, as described in Chapter 3, the revised PLD expands the scope of product and damages that may be litigated and introduces changes that shift the balance of risk towards producers and other economic operators, increasing the probability of litigation, including through the use of collective actions.<sup>10</sup>

Nonetheless, private enforcement via the courts still plays a minor role in the Nordic countries. The reason collective actions are rarely used is that Danish, Finnish and Swedish consumers have better tools at their disposal. When a company fails to comply with a regulation, consumers in these countries prefer alternative dispute resolution (ADR) mechanisms run by Ombudsmen. According to a European Commission survey,<sup>11</sup> 66 per cent of Finnish, 46 per cent of Swedish, and 39 per cent of Danish citizens strongly agreed that it is easy to resolve disputes through an out-of-court process.

These findings align with the same European Commission survey<sup>12</sup> which shows that in Sweden and Finland fewer than 2 per cent of people had ever joined a collective action. In Denmark none of the respondents reported participating in one. Across our database of 470 collective action cases recorded in 23 EU countries between 2008 and 2025,<sup>13</sup> the three Nordic countries accounted for just 3 per cent of all cases,<sup>14</sup> lower than their combined share of the EU population and GDP at 5<sup>15</sup> and 7<sup>16</sup> per cent respectively.

The clash between the Nordic model of consumer protection that is rooted in public enforcement and the shift to US-style private enforcement via mass litigation has also been flagged by Nordic regulators. Sweden's Financial Supervisory Authority (Finansinspektionen, FI) warned that the RAD sits uneasily with established principles of public administration.<sup>17</sup> For instance, allowing consumer groups to act as full parties in FI proceedings forces the authority to investigate even trivial complaints regardless of its own priorities.

<sup>10</sup> Guinea, O., Pandya, D., Sharma, V., and Zilli, R., (2025). Mass Litigation and the Future of Litigation Funding in Ireland and Europe. ECIPE. Policy Brief. Available at: <https://ecipe.org/publications/mass-litigation-ireland-and-europe/>

<sup>11</sup> European Commission (2025) Consumer conditions survey. Available at: [https://commission.europa.eu/publications/2024-consumer-conditions-survey-presentations\\_en](https://commission.europa.eu/publications/2024-consumer-conditions-survey-presentations_en)

<sup>12</sup> Ibid

<sup>13</sup> The database used in this Policy Brief is an updated version of Erixon, F., Guinea, O., Pandya, D., Sharma, V., Sisto, E., du Roy, O., Zilli, R., & Lamprecht, P. (2025). The Impact of Increased Mass Litigation in Europe. ECIPE, Brussels, occ. paper 3/2025, 108 p. For further details on the database see Annex 3 of that publication.

<sup>14</sup> In terms of the number of collective actions, Denmark with 10 cases ranks 10th, Finland with 3 cases ranks 16th, and Sweden with 3 cases ranks 18th out of 23 EU countries with available data.

<sup>15</sup> Eurostat (2025). Population and population change statistics as of 1 January.

<sup>16</sup> Eurostat (2025). Gross domestic product at market prices.

<sup>17</sup> Finansdepartementet. (2022). Skydd för konsumenters kollektiva intressen – genomförande av EU:s gruppansvarsdirektiv (SOU 2022:42). Available at: <https://www.fi.se/contentassets/23624363779749308e614f58990a1365/remissvar-konsumenters-kollektiva-intressen-02280.pdf>

## 2.2 Consumer Redress Mechanisms in the Nordic Countries

As mentioned previously, consumers in the Nordic countries prefer quicker and simpler procedures for redress, such as ADR or industry-wide compensation schemes overseen by an Ombudsman. These mechanisms are far less costly than litigation, both for citizens, companies and for the legal system itself.<sup>18</sup>

Consumer Ombudsmen in the Nordic countries handle individual cases and issue non-binding recommendations to settle disputes (see Annex 1 for a description of the Ombudsman system in each of the Nordic countries). In 2024, for instance, the Swedish National Board for Consumer Complaints (ARN) received 25,685 cases. These included disputes over goods and services, product purchases, banking and insurance, and travel. The ARN's decisions take the form of recommendations rather than binding judgments. Yet compliance is strong, with 76 per cent of decisions followed by the parties.<sup>19</sup>

The law allows groups of consumers to take cases to the Consumer Ombudsman for resolution. Having a common dispute reviewed by the Consumer Ombudsman, such as the ARN in Sweden, can be more advantageous for the group than going to court: the procedure is free, aside from possible inspection costs, and does not require consumers to appear, as they would in court, and, even if a claim fails, consumers do not have to pay the other side's legal costs.

The Nordic Ombudsmen themselves have authority to bring cases to court on behalf of consumers. Importantly, many successful cases focus on compelling companies to change their practices rather than on winning compensation for consumers. The agency also represents individuals or groups of consumers in claims for compensation, though group representation in courts remains relatively rare.

Among others, court-based claims led by the Ombudsman have included: (1) the Immittec ruling in which Sverige AB and Norwegian AS were ordered to pay over €180,720 for repeated breaches of the Marketing Act;<sup>20 21</sup> (2) Svea Bank AB that was barred from imposing late-payment fees and was fined €180,720 fine by the Patent and Market Court;<sup>22 23</sup> and (3) OPR Finance AB that was fined €451,800 and warned for inadequate credit assessments.<sup>24 25</sup> At the group level, the Swedish Ombudsman in 2014, represented 2,000 consumers in a case against the energy company Kraftkommissionen/Stävrullen Finans, securing €384,685 in compensation or around

<sup>18</sup> Hodges, C. (2019) Collective Redress: The Need for New Technologies. *Journal of Consumer Policy*, 42, 59-60. <https://doi.org/10.1007/s10603-018-9388-x>

<sup>19</sup> ARN. Statistics. Available at: <https://www.arn.se/om-arn/statistik>

<sup>20</sup> KO. (2025, March 28). Judgment in the KO – Immittec case. Available at: <https://www.konsumentverket.se/dom/dom-i-malet-ko-immittec/>

<sup>21</sup> European Central Bank average exchange rate for 2025: SEK 1 = EUR 0.09036.

<sup>22</sup> KO. (2025, January 30). Judgment in the KO – Svea Bank case. Available at: <https://www.konsumentverket.se/dom/dom-i-malet-ko-svea-bank/>

<sup>23</sup> European Central Bank average exchange rate for 2025: SEK 1 = EUR 0.09036.

<sup>24</sup> KO. (2025, February 5). Judgment in the case of the Consumer Agency – OPR Finance AB. Available at: <https://www.konsumentverket.se/dom/dom-i-malet-konsumentverket-opr-finance-ab/>

<sup>25</sup> European Central Bank average exchange rate for 2025: SEK 1 = EUR 0.09036.

€192 per person.<sup>26 27</sup> In Finland, the Ombudsman signalled a potential collective action against J.W.-Yhtiöt over running-account credits that were ruled as excessively costly. The mere threat of collective action prompted swift negotiations and a settlement amount of over €1.1 million was distributed to about 588 consumers, with each consumer receiving €1,871.<sup>28</sup>

Compared with collective actions elsewhere the differences are striking. The UK case of *Merricks v. Mastercard* shows how costly mass litigation can be and how, despite large headline settlement amounts, claimants can be left almost empty-handed. £16 billion was initially claimed against Mastercard in relation to allegedly excessive payment card fees. After a decade of litigation, £100 million was finally awarded as compensation, leaving claimants with up to £70 each if only 5 per cent claimed but as little as £2.50 each if the full class of 44 million people came forward. Around £46 million went to the litigation funder, with a further £54 million potentially payable as return on capital, depending on the number of claims submitted. Mr Merricks's legal team billed more than £18.1 million. Mastercard's legal costs were undisclosed but were likely much higher.<sup>29</sup>

Making direct comparisons between the Nordic cases and the *Merricks v. Mastercard* case in UK may be unfair as there are significant differences between the legal systems in the UK and the Nordic countries and between a collective action that involves several hundred claimants and one that involves 44 million. However, the comparison does show that the Nordic model achieves similar – and often greater – levels of consumer redress per person at a much lower cost for society. In the Nordic countries, the Ombudsman bears the enforcement costs as part of its public duties but resorts to litigation, individual or collective, only rarely, preferring ADR mechanisms first. By contrast, the UK experience as well as similar experiences in the US and Australia where mass litigation is common, highlights how limited compensation for claimants often pales against the sizeable fees charged by plaintiff lawyers and the returns obtained by funders. The Ombuds-based model of the Nordics delivers both compensation and behavioural change but without a costly parallel industry of litigation funders, high-stakes lawyers and claims collectors.

In summary, bringing claims through court-based litigation is generally at odds with the Nordic model where Ombudsmen and ADR mechanisms offer more effective and cheaper alternatives. Together, this framework underpins consumer redress and reduces reliance on litigation, as illustrated in Box 1 below.<sup>30</sup>

<sup>26</sup> Mitti Juridiken (2014, December 11). Compensation to thousands of consumers. Available at: <https://www.infotorgjuridik.se/premium/mittijuridiken/article210605.ece?format=print>

<sup>27</sup> European Central Bank average exchange rate for 2014: SEK 1 = EUR 0.10991.

<sup>28</sup> Finnish Competition and Consumer Authority. (2021). Instant credit class action: The Consumer Ombudsman's negotiations with J.W.-Yhtiöt and WestStar ended with the payment of compensation. Available at: <https://www.kkv.fi/en/current/press-releases/instant-credit-class-action-the-consumer-ombudsmans-negotiations-with-j-w-yhtiöt-and-weststar-ended-with-the-payment-of-compensation/>

<sup>29</sup> FCJ. (2025, February 25). Merricks-Mastercard Settlement Shows Real Winners from Class Actions. Available at: <https://fairciviljustice.org/news/the-merricks-mastercard-settlement-shows-the-real-winners-from-class-actions/>

<sup>30</sup> The Volkswagen Sweden case illustrates how national laws differ in their approaches to redress, with Sweden applying a notably stricter standard on questions of harm and compensation.

**BOX 1: VOLKSWAGEN DIESEL CASES IN SWEDEN: WHAT WAS DIFFERENT?**

During the so-called Volkswagen 'diesel-gate' scandal, arising from the use of defeat devices by the car manufacturer to hide toxic diesel emissions, Volkswagen recalled the affected models (i.e., the cars with the manipulated software). Many Swedish consumers sought additional compensation, citing Germany as an example, where Volkswagen had settled a civil lawsuit with thousands of car owners of Volkswagen cars. In this case, courts held that VW acted immorally and deceived consumers, establishing that harm had occurred under national law. Swedish law, however, does not contain the same legal concept.

Buyers claimed that their car was defective or that the seller acted in bad faith under the Swedish Consumer Sales Act. The recall addressed the first ground while the second requires conduct of a far more serious nature. To date, this approach has not been successfully tried in Sweden in connection with the diesel scandal.

Many Swedish VW owners turned to the National Board for Consumer Complaints (ARN). Nearly 30 cases were filed with the ARN but all were rejected. Owners alleged either: (1) that the cars contained software manipulating nitrogen oxide emissions during test conditions, justifying cancellation or compensation; or (2) that performance worsened after Volkswagen's recommended update.

In both cases, ARN found that consumers had not met the burden of proof to show there was a defect that required a remedy beyond Volkswagen fixing the problem with the car. In general, harm must be specifically attributed and no evidence was provided that showed that owners of cars with emissions-cheating software suffered monetary losses.

A further complication was that the affected cars were never illegal to drive in Europe. Unlike the US, where NOx rules are six times stricter, EU standards permitted higher emissions. Thus, while other countries focused on deception and illegality, Swedish enforcement turned on whether consumers had suffered actual harm, and concluded they had not.

Source: Teknikens Värld.

## **2.3 Consumer Protection in the Nordic Countries**

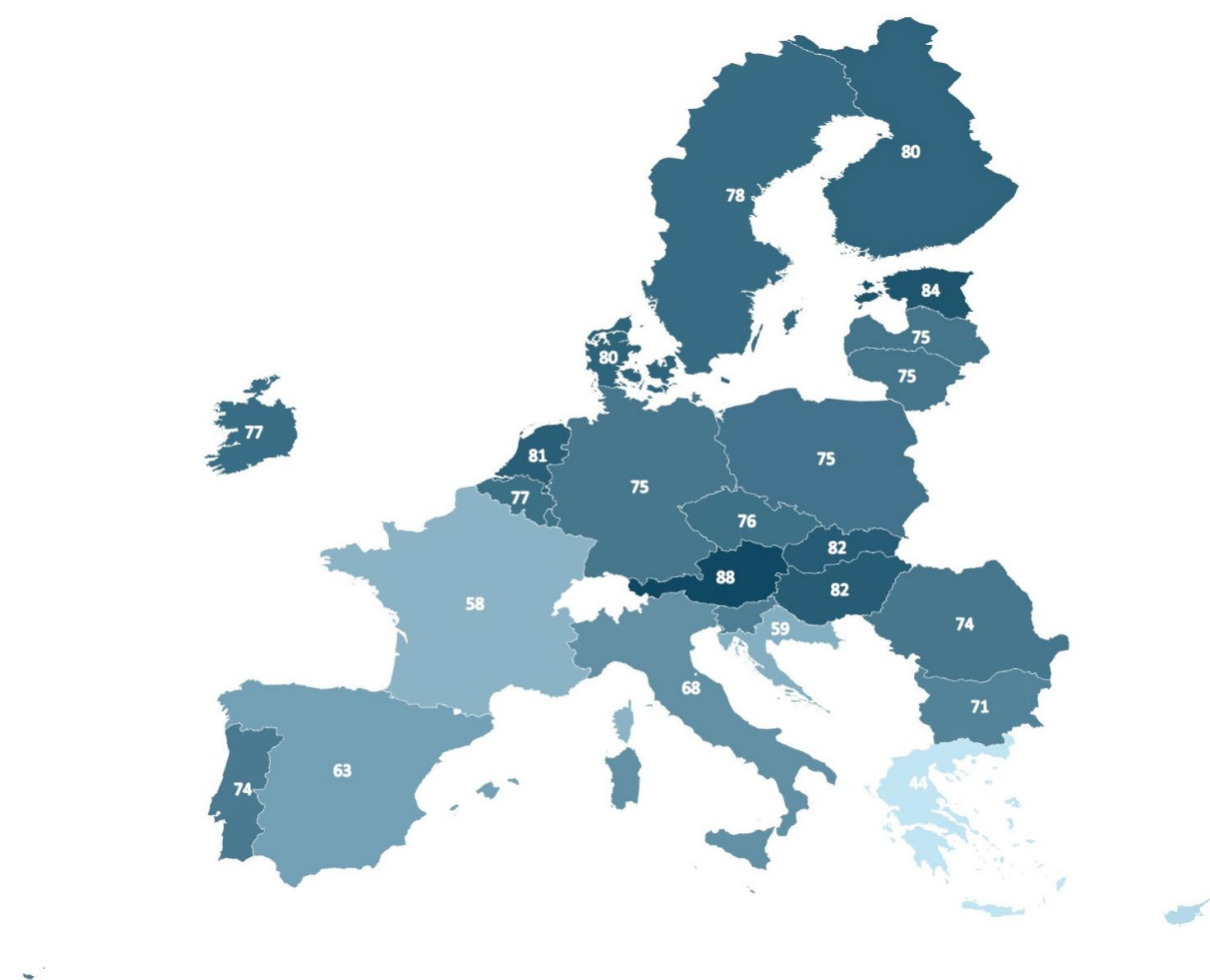
Some stakeholders may argue that a stronger litigation culture leads to better consumer protection. The Nordic experience challenges this assumption. Despite the comparatively low levels of private enforcement through mass litigation, Sweden, Denmark, and Finland enjoy some of the highest standards of consumer protection in Europe.

As previously explained, this outcome reflects the interaction of several factors, including strong and effective public institutions and high levels of public trust. Around eight out of ten citizens in

the Nordic countries trust public authorities to protect their rights as consumers,<sup>31</sup> significantly above the EU average which stands at just 61 per cent.

Another indicator of strong consumer protection in the Nordic countries is the relatively low levels of faulty products and business malpractices. Most consumers reported not having experienced any safety issues with purchased products in recent years.<sup>32</sup> As shown in the Figure below, an impressively high number of around 8 out of 10 consumers in Finland, Sweden, and Denmark believe that companies respect their rights as consumers.<sup>33</sup>

**FIGURE 1: SHARE OF THE POPULATION WHO AGREE THAT RETAILERS RESPECT CONSUMER RIGHTS**



Source: European Commission (2025). Consumer Conditions Survey

<sup>31</sup> European Commission (2025). Consumer Conditions Survey. Available at: [https://commission.europa.eu/publications/2024-consumer-conditions-survey-presentations\\_en](https://commission.europa.eu/publications/2024-consumer-conditions-survey-presentations_en). Specifically, Q3\_1 How strongly do you agree or disagree with each of the following statements in [country]? You trust public authorities to protect your rights as a consumer. Total 'Agree': 77 per cent Denmark; 84 per cent Finland; and 82 per cent Sweden.

<sup>32</sup> Based on the responses 90 per cent in Denmark, 88 per cent in Finland, and 86 per cent in Sweden of the respondents reported not experiencing safety issues. European Commission (2025). Consumer Conditions Survey. Available at: [https://commission.europa.eu/publications/2024-consumer-conditions-survey-presentations\\_en](https://commission.europa.eu/publications/2024-consumer-conditions-survey-presentations_en)

<sup>33</sup> European Commission (2025). Consumer Conditions Survey. Available at: [https://commission.europa.eu/publications/2024-consumer-conditions-survey-presentations\\_en](https://commission.europa.eu/publications/2024-consumer-conditions-survey-presentations_en). Specifically Q3\_2 How strongly do you agree or disagree with each of the following statements in [country]? In general, retailers and service providers respect your rights as a consumer.

### 3. CHALLENGES IN IMPLEMENTING THE NEW PRODUCT LIABILITY DIRECTIVE

#### 3.1 The Concept of 'Defectiveness' in Digital Technologies

One of the most striking aspects of the new PLD is its expanded definition of a product which now explicitly includes digital manufacturing files and software (Article 4(1)). While the Directive deliberately leaves the term 'software' open-ended to accommodate future technological developments, Recital 13 clarifies that it encompasses operating systems, firmware, computer programs, applications, and AI systems.

The challenge of assigning liability to digital products comes from their complexity. In AI-driven environments, liability is harder to pin down: causal chains are complex, non-linear, and spread across hardware, software, networks and third-party inputs. Moreover, these are not static products but dynamic services, constantly updated and monitored for flaws and threats. As a result, it is difficult to demonstrate whether harm arises from a defect in the product itself rather than from user misuse, third-party interference, or the autonomous behaviour of the AI system.<sup>34</sup>

This uncertainty, left unresolved by the PLD, raises the compliance burden for companies. While safety testing is standard, the PLD moves beyond risk-based measures to demand exhaustive verification. Companies must now carry out extensive testing across multiple input combinations and maintain complete documentation records – not only for the first version but for every update. This forces firms to devote substantial resources to proving the 'absence of a defect', potentially even twenty-five years later.

Several companies have stated that this burden is further intensified by uncertainty over how long-term liability under the PLD interacts with existing EU regulation. Many products remain subject to harmonised product regulations and common conformity rules, such as CE marking and the Medical Device Regulation,<sup>35</sup> which are designed to ensure compliance with product safety standards. However, it seems that compliance under these regimes will not limit or mitigate liability under the PLD.

This uncertainty is particularly acute for software-based products and updates. In such cases, it is often difficult to determine when an update constitutes a 'substantial modification' ('väsentlig förändring')<sup>36 37</sup> that triggers renewed liability or compliance obligations. This creates a perverse incentive: even though iterative improvement is a natural part of engineering, manufacturers may fear that introducing updates will be interpreted as evidence that the previous version

<sup>34</sup> This problem is compounded by the opacity of many AI systems, where even experts may struggle to trace or fully understand how a particular decision or malfunction occurred.

<sup>35</sup> APPLiA (2026), APPLiAs remissvar på betänkandet En ny produktansvarslag (SOU 2025:103), <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/applia.pdf>

<sup>36</sup> ElektronikBranschen (2026), ElektronikBranschens remissvar på betänkandet En ny produktansvarslag (SOU 2025:103), <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/elektronikbranschen.pdf>

<sup>37</sup> Svensk Handel (2026), Yttrande över En ny produktansvarslag, SOU 2025:103, <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/svensk-handel.pdf>

was defective. Consequently, firms may hesitate to innovate or they may delay the launch of improved products to avoid fuelling liability claims.<sup>38</sup>

Companies such as Ericsson have previously voiced these concerns, warning that they cannot guarantee immunity from liability claims.<sup>39</sup> These concerns have once again become relevant in the current context. For Nordic telecom firms, the risk is clear since 5G and future-generation (xG) systems now fall squarely within the PLD's expanded scope.

As noted in Chapter 1, the PLD also creates risks for the highly digitalised Nordic public sector. Uncertainty over what constitutes a defect and who is responsible could leave public authorities exposed as 'producers' or 'deployers.' Moreover, with public digital platforms increasingly dependent on software and automated decision-making, the state may be subject to liability claims in cases of malfunction, data errors or defective algorithms when delivering public services such as healthcare.<sup>40</sup>

## 3.2 Extending Liability Across Supply Chains and Over Time

The Directive also broadens the scope of responsibility by defining a 'liable economic operator' (Article 4(15)) to include not only the product manufacturer but also component manufacturers, providers of related services, authorised representatives, importers, and distributors.

The expansion of liability across a large number of new actors is problematic for digital markets where multiple companies including software developers, component suppliers, integrators, cloud service providers, platform operators, and even end-users, shape a product's functionality. This extension of liability across multiple actors undermines the traditional producer-centred model, making fault hard to assign in a linear way.

Liability will also affect companies unevenly. Small and medium-sized enterprises (SMEs) often lack the resources to absorb legal risks because of higher insurance premiums and litigation costs.<sup>41</sup> In addition, expanded liability could chill innovation among the same SMEs and start-ups which may delay or halt launches due to fears of costly litigation.

<sup>38</sup> Galasso, A., & Luo, H. (2024). Product Liability Litigation and Innovation: Evidence from Medical Devices (NBER Working Paper No.32215). National Bureau of Economic Research. Available at: [https://www.nber.org/system/files/working\\_papers/w32215/w32215.pdf](https://www.nber.org/system/files/working_papers/w32215/w32215.pdf)

<sup>39</sup> Ericsson.(2019)AnnualReport.Availableat:<https://www.ericsson.com/495c1f/assets/local/investors/documents/2019/ericsson-annual-report-2019-en.pdf>

<sup>40</sup> Several European countries have experienced mass litigation cases targeting public entities. In the Netherlands, a mass action was filed against the Dutch National Health Service (GGD) following an alleged data breach. Although the court dismissed the case as unfounded, the GGD incurred substantial legal costs. In the UK, similar cases have targeted government bodies and public authorities. Source: Guinea, O., Pandya, D., & Sharma, V. (2025). Collective Action in the Netherlands: Why It Matters for the Transposition of the Product Liability Directive. Brussels, Policy Brief 11/2025, 35 p. Guinea, O., Pandya, D., Sharma, V., & Zilli, R. (2025). The Impact of Increased Mass Litigation in the UK. ECIPE, Brussels, occ. paper 6/2025, 78 p.

<sup>41</sup> Thomasen, K. (2021). AI and tort law. In F. Martin-Bariteau & T. Scassa (Eds.), Artificial intelligence and the law in Canada. ON: LexisNexis Canada.

The Directive also recognises that many products remain under the manufacturer's control even after sale via software updates or remote access.<sup>42</sup> Safety should, therefore, be judged at the point when a product leaves the manufacturer's control, not when it is sold (Recital 18). This lifecycle view creates specific problems for digital systems. As mentioned, unlike traditional goods, they do not simply wear out; they evolve through updates, new data and integration with other services. Moreover, risks may appear years after sale, for example, through vulnerabilities introduced by later updates or compatibility issues with newer systems. Again, proving causation over such timeframes and within these complex systems is extremely difficult. Evidence will be hard to trace; after twenty-five years, records may be incomplete, forensic traces lost, or the original manufacturer no longer in business.

### 3.3 Reversal of the Burden of Proof

The EU PLD makes it much easier for claimants to bring claims against producers and suppliers by introducing rebuttable presumptions – i.e., legal assumptions that will apply unless the defendant can disprove them. For example, under the new PLD, in certain vaguely-defined situations, a claimant no longer needs to prove that a product was defective – the claimant only has to show that it is likely the product was defective and caused harm. The burden of proof would then shift to the producer who must rebut the claim. Moreover, if it is deemed 'excessively difficult' for a claimant to prove a defect or a causal link between the defect and the harm, the new PLD presumes both. Again, the burden would shift to the producer who must demonstrate that the product was not defective or that it did not cause the harm.

The Directive also introduces specific presumptions of defectiveness. The first arises when a defendant refuses to comply with a court order to disclose 'relevant' evidence. The second applies when a claimant demonstrates that a product fails to meet mandatory safety requirements under EU or national law, and the third when harm results from an obvious malfunction during 'reasonably foreseeable' use or under 'ordinary circumstances'.

These presumptions reverse the burden of proof in the above situations. However, this was not the legislature's intention, and considerable care will be needed when adapting national rules during transposition. Importantly, in its legislative proposal, the European Commission sought to ensure that the burden of proof was "more fairly shared" between injured parties and manufacturers in complex cases. However, it stressed that "there will be no reversal of the burden of proof" as this "would expose manufacturers to significantly higher liability risks and could hamper innovation, leading also to potentially higher product prices and reduced access to innovative products".<sup>43</sup>

Furthermore, the evidence disclosure rules linked to these presumptions represent a significant procedural innovation as even the mere 'plausibility' of a claimant's allegation can trigger an

<sup>42</sup> In terms of liability over time, the revised PLD introduces a ten-year expiry period, starting from the date a product is placed on the market or put into service. However, the Directive also recognises that some harms, particularly personal injuries, may only become apparent years after exposure. To address this, the PLD allows the expiry period to be extended to twenty-five years in cases where medical evidence shows that symptoms take a long time to emerge.

<sup>43</sup> European Commission (2022). Proposal for a Directive of the European Parliament and of the Council on liability for defective products (COM/2022/495 final).

order to release 'relevant' evidence by the defendant. In practice, however, this is far from straightforward. It is often unclear what qualifies as 'relevant' evidence, particularly when documentation is dispersed across corporate groups, cloud providers, or third-party suppliers. In addition, as claimants may contest not only the adequacy but also the accessibility and clarity of disclosure, defendants are likely to incur significant additional compliance costs, which can in some cases amount to as much as half of the costs associated with a case.<sup>44</sup>

The new presumptions and evidence disclosure rules are likely to be powerful tools for claimants (especially if they are backed by specialist claims lawyers and litigation funders), particularly in complex cases such as those involving AI systems where proving causation or defectiveness is often challenging. Once a claimant meets the plausibility threshold and secures a disclosure order, any shortcomings in disclosure will shift the evidentiary balance in their favour. This asymmetry will also drive-up compliance costs as firms must devote substantial resources to recording, storing, and presenting information not only to satisfy legal scrutiny but also to demonstrate a negative, i.e., the absence of any wrongdoing.<sup>45</sup>

These concerns are also reflected in numerous consultation responses ('remissvar') submitted to the Swedish government as part of its review of the PLD transposition. Stakeholders argue that the reversal of the burden of proof ('presumptionsreglerna') will create legal ambiguity<sup>46</sup> and increase administrative costs,<sup>47</sup> particularly given the expanded definition of injury.<sup>48</sup>

## **4. THE IMPACT OF THE NEW PRODUCT LIABILITY DIRECTIVE ON INNOVATION**

### **4.1 The New Product Liability Directive, Mass Litigation and Its Impact on Innovation**

There is a direct connection between the expansion of liability within the new PLD described in the previous chapter and the likelihood of increased mass litigation.

The expansion of liability to include more products and companies and the extension of the expiry period to bring claims, as well as the changes to the procedural rules in favour of litigants, will increase the likelihood of collective action particularly in the ICT sector. This is because ICT products have certain features that make them especially vulnerable to mass litigation in case of a liability breach. A single defect, security flaw, or data breach in an application or platform may simultaneously affect thousands, or even millions, of users in a similar way. As a

<sup>44</sup> U.S. House of Representatives. (1995). Private Securities Litigation Reform Act of 1995: Conference report to accompany H.R. 1058 (H.R. Rep. No. 104-369). U.S. Government Printing Office.

<sup>45</sup> The new PLD is framed around the assumption of an information and resource imbalance between individual claimants and large corporate defendants. However, this rationale sits uneasily with the growing prevalence of third-party funders that finance collective actions. In such actions the traditional claimant-defendant asymmetry is often diminished or even reversed.

<sup>46</sup> Svensk Försäkring (2025). En ny produktansvarslag (SOU 2025:103). <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/svensk-forsakring.pdf>

<sup>47</sup> Teknikföretagen (2026). Remissvar – En ny produktansvarslag (SOU 2025:103). <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/teknikforetagen.pdf>

<sup>48</sup> APPLiA (2026). APPLiAs remissvar på betänkandet En ny produktansvarslag (SOU 2025:103). <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/applia.pdf>

result, potential harm is often concentrated and standardised, making such cases well suited to collective redress mechanisms. The revised PLD may multiply these risks and lead to<sup>49</sup> higher insurance costs for companies.

Moreover, this trend is likely to be reinforced by the growing role of third-party litigation funding which reduces the financial risk for claimants and encourages large-scale claims. Taken together, these factors may expose Nordic firms to heightened legal and financial risks. SMEs may be particularly affected as higher insurance premiums and litigation costs can constrain investment and innovation. As noted by the Swedish medical technology sector, this may, over time, undermine economic competitiveness.<sup>50</sup>

Concerns over the economic impact of PLD are not limited to Swedish companies; similar apprehensions have been raised by Danish firms. In response to the national proposal to implement the revised PLD, the business federation Danish Industry has warned that liability insurance costs for Danish companies are likely to rise significantly, potentially exceeding government estimates.<sup>51</sup> This suggests that the economic impact of the revised PLD could prove more substantial than initially anticipated.<sup>52</sup>

## 4.2 The Economic Impact of Mass Litigation on Innovation

As mentioned previously, increasing liability and the probability of facing individual or collective litigation affects innovation. Economic research highlights a tipping point in product liability: while moderate liability pressure may incentivise greater R&D investment in safer products, excessive or poorly targeted liability can suppress innovation altogether.<sup>53</sup>

Moreover, uncertainty surrounding litigation outcomes, particularly the unpredictability of damages in cases involving emerging technologies, increases the perceived risk of pursuing breakthrough innovations.<sup>54</sup> This reallocation of priorities may not affect total R&D spending levels but it does alter their composition by re-directing resources away from breakthrough developments and toward safer, less transformative alternatives. In such a climate, innovation is increasingly viewed through the lens of legal risk rather than as a tool for public benefit.

To estimate the potential impact of increased mass litigation on innovation in Denmark, Finland, and Sweden, we conduct a scenario analysis.<sup>55</sup> This analysis assumes that if mass litigation in these countries were to mirror levels seen in the US, where the economic effects of mass litigation have been studied in detail, the impact on key economic indicators would be

<sup>49</sup> Försäkringsjuridiska Föreningen (2026), Remissyttrande SOU 2025:103, <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/forsakringsjuridiska-foreningen.pdf>

<sup>50</sup> Swedish MedTech (2026), Remissvar avseende betänkandet En ny produktansvarslag (SOU 2025:103), <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/swedish-medtech.pdf>

<sup>51</sup> Dansk Industri (2026), Høringssvar vedrørende forslag til ny produktansvarlov.

<sup>52</sup> Swiss Re Institute. (2024). Social inflation: Litigation costs rise as societal trends reshape the liability landscape (Sigma No. 4/2024). Available at: <https://www.swissre.com/institute/research/sigma-research/sigma-2024-04-social-inflation.html>

<sup>53</sup> Viscusi, W. K., & Moore, M. J. (1993). Product liability, research and development, and innovation. *Journal of Political Economy*, 101(1), 161-184.

<sup>54</sup> Sunstein, C. R., Hastie, R., Payne, J. W., Schkade, D. A., & Viscusi, W. K. (2008). *Punitive damages: How juries decide*. University of Chicago Press.

<sup>55</sup> For an extended explanation of the methodology see Erixon, F., Guinea, O., Pandya, D., Sharma, V., Sisto, E., du Roy, O., Zilli, R., & Lamprecht, P. (2025). *The Impact of Increased Mass Litigation in Europe*. ECIPE, Brussels, occ. paper 3/2025, 108 p.

proportionate to the effects observed there. Acknowledging that the levels of mass litigation in the Nordic countries are not going to reach the level seen in the US, three conservative scenarios are modelled by assuming that the costs of mass litigation in Denmark, Finland, and Sweden amount to only 10, 20, and 30 per cent of US mass litigation costs respectively.<sup>56</sup>

The PLD, on its own, is unlikely to lift the number of collective actions to the levels modelled in the three scenarios. The costs presented below should, therefore, not be attributed to the new law alone but should be interpreted as part of the growing role of private litigation in the EU regulatory enforcement landscape, as described in Chapter 2. The EU PLD will provide a significant boost to this ongoing trend.

The scenarios-based analysis draws on estimates from a US study by Kempf and Spalt (2020) which examined the effect of private enforcement on the market capitalisation of companies.<sup>57</sup> The study found that the market value of those companies that faced collective action lawsuits dropped by 2.8 per cent. These lawsuits, that often target successful innovators, have a direct and lasting negative impact on company valuations which in turn can reduce their capacity and incentive to invest in innovation.

Data on the market capitalisation of the most innovative Nordic companies comes from the EU's Joint Research Centre's annual report which identifies the top 2,500 global investors in research and development (R&D), considered the most innovative companies worldwide (see Annex 5 for the full list of companies).<sup>58</sup> The report includes market capitalisation data for 54 Nordic firms: 23 from Denmark, 9 from Finland, and 22 from Sweden. Although 54 out of 2,500 may appear modest, these companies account for 1.9 per cent of global market capitalisation, above the Nordic countries' combined share of global GDP which stands at 1.2 per cent.<sup>59</sup>

Using the scenario methodology – explained in detail in Annex 3 – we applied 10, 20, and 30 per cent of Kempf and Spalt's 2.8 per cent estimate to the aggregate market capitalisation of the 54 most innovative companies from the three Nordic countries. This produced estimates for the Low (10 per cent), Medium (20 per cent), and High (30 per cent) Growth Scenarios. The results are shown in Table 1. In total, the projected decline in market capitalisation for the top 54 Nordic R&D investors ranges from a low of €2 billion to a high of €7 billion. To put these figures in perspective, gross domestic expenditure on R&D by the government sector in 2024 across Denmark, Finland, and Sweden combined was €1.8 billion.<sup>60</sup>

<sup>56</sup> Annex 3 includes a detailed explanation of the methodology and the calculations behind the results. In addition to the impact on innovation costs, Annex 4 includes an assessment of the impact of mass litigation on economic variables such as litigation costs and GDP for the three Nordic countries using the scenarios analysis.

<sup>57</sup> Kempf, E., & Spalt, O. (2020). Attracting the sharks: Corporate innovation and securities class action lawsuits. *Management Science*, 69(3), 1805-1834.

<sup>58</sup> Nindl, E., Confraria, H., Rentocchini, F., Napolitano, L., Georgakaki, A., Ince, E., Fako, P., Tuebke, A., Gavigan, J., Hernandez Guevara, H., Pinero Mira, P., Rueda Cantuche, J., Banacloche Sanchez, S., De Prato, G. and Calza, E., The 2023 EU Industrial R&D Investment Scoreboard, Publications Office of the European Union, Luxembourg, 2023, doi:10.2760/506189, JRC135576

<sup>59</sup> IMF. (2024) GDP at current prices, Accessed at: <https://www.imf.org/external/datamapper/NGDPD@WEO/OEMDC/ADVEC/WEOWORLD>

<sup>60</sup> Eurostat (2026). Gross domestic expenditure on R&D (GERD) by sector of performance. Available at: [https://ec.europa.eu/eurostat/databrowser/view/rd\\_e\\_gerd\\_tot/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/rd_e_gerd_tot/default/table?lang=en)

**TABLE 1: REDUCTION IN MARKET CAPITALISATION FOR THE TOP 42 NORDIC R&D INVESTORS**

| Country | Actual Market Capitalisation Value (€ billion) | Low Growth Scenario (€ billion) | Medium Growth Scenario (€ billion) | High Growth Scenario (€ billion) |
|---------|------------------------------------------------|---------------------------------|------------------------------------|----------------------------------|
| Denmark | 468                                            | 1.3                             | 2.6                                | 3.9                              |
| Finland | 93                                             | 0.3                             | 0.5                                | 0.8                              |
| Sweden  | 298                                            | 0.8                             | 1.7                                | 2.5                              |
| Total   | 859                                            | 2.4                             | 4.8                                | 7.2                              |

Source: ECIPE's calculations based on the 2024 EU Industrial R&D Investment Scoreboard (European Commission, 2024).

The costs associated with the growing risk of mass litigation under the new PLD may disproportionately affect certain sectors. Technology-intensive industries such as the ICT sector and life sciences face particularly high exposure to liability and collective actions (see Annex 2 for a description of the importance of these two sectors for the Nordic economies). These sectors are typically characterised by a large number of end users, substantial investment in intangible assets, long innovation cycles, and significant product and data complexity. Of the 54 most innovative Nordic companies identified, 21 operate in either the ICT or life sciences sectors. This includes 13 companies from Denmark, 3 from Finland, and 5 from Sweden.

Applying the same scenario methodology to the 21 Nordic companies in the life sciences and ICT sectors yields smaller but similarly striking results. For these R&D-intensive firms, the projected decline in market capitalisation ranges from €1.3 billion to €3.8 billion.

**TABLE 2: REDUCTION IN MARKET CAPITALISATION FOR THE TOP NORDIC R&D INVESTORS IN LIFE SCIENCES AND ICT**

| Sectors       | Country               | Actual Market Capitalisation Value (€ billion) | Low Growth Scenario (€ billion) | Medium Growth Scenario (€ billion) | High Growth Scenario (€ billion) |
|---------------|-----------------------|------------------------------------------------|---------------------------------|------------------------------------|----------------------------------|
| Life sciences | Nordic                | 406                                            | 1.1                             | 2.3                                | 3.4                              |
|               | Denmark <sup>61</sup> | 391                                            | 1.1                             | 2.2                                | 3.3                              |
|               | Finland               | 4                                              | 0.01                            | 0.02                               | 0.04                             |
|               | Sweden                | 11                                             | 0.03                            | 0.1                                | 0.1                              |
| ICT           | Nordic                | 47                                             | 0.1                             | 0.3                                | 0.4                              |
|               | Denmark               | n.a.                                           |                                 |                                    |                                  |
|               | Finland               | 20                                             | 0.1                             | 0.1                                | 0.2                              |
|               | Sweden                | 27                                             | 0.1                             | 0.2                                | 0.2                              |
| Total         |                       | 453                                            | 1.3                             | 2.5                                | 3.8                              |

Source: Author's calculations based on the 2024 EU Industrial R&D Investment Scoreboard (European Commission, 2024).

Finally, the effects of a decline in market capitalisation will also be felt by households, particularly savers and pensioners. In 2024, Danish, Swedish, and Finnish households invested close to 40 per cent of their savings in equities, with a significant portion linked to pension schemes. Pension fund assets as a percentage share of total GDP stood at 200 in Denmark, 107 in Sweden, and 61 per cent in Finland.<sup>62</sup> Although there is no public data on how much of these savings are invested in domestic companies it is likely that a substantial share is held in national firms. This suggests that any fall in market capitalisation triggered by mass litigation under the new PLD could also adversely affect household wealth and future pension returns.

## 5. POLICY RECOMMENDATIONS

Digital technologies such as AI have already generated significant opportunities for the creation of start-ups and new modes of customer services. However, no one knows quite how AI-driven products and services will evolve in the future. Therefore, policymakers should act with caution. Regulating a novel technology is like walking into a dark room: you do not rush in

<sup>61</sup> An interesting example from Denmark's life sciences sector is Novo Nordisk. At the time when the JRC compiled its dataset, the company was responsible for 69 per cent of the market capitalisation of Denmark's top innovative companies in the life sciences sector. Novo Nordisk's popularity also makes it a target for private litigation. The increasing use of the diabetic treatment Ozempic as a weight loss drug increases the risk of a mass litigation case against the company, which could even have negative consequences for the entire Danish economy. This risk is already reflected in the United States, where approximately 1,521 cases have been consolidated in multidistrict litigation (MDL) No. 3094, involving claims against Novo Nordisk and other pharmaceutical manufacturers. The MDL includes Novo Nordisk's GLP-1 receptor agonist drugs. see: Couch, O. S., & Orent, D. J. (2026, February 2). Novo Nordisk lawsuits. Motley Rice. Available at: <https://www.motleyrice.com/diabetes-lawsuits/novo-nordisk>

<sup>62</sup> OECD. (2023). Share of households and NPISHs' currency and deposits, debt securities, equity, investment fund shares, life insurance and annuity entitlements and pension entitlements as a percentage of their total financial assets.

but carefully feel your way along the walls to understand the space and to avoid tripping over unseen obstacles.

An important caveat when discussing the regulation of AI is that AI-products differ fundamentally from most other products. An appliance does not change after leaving the factory floor; however, some AI systems are continuous learning machines. They evolve as they absorb new data from their users. That feedback is not a by-product but the very source of their value: it helps sharpen predictions and gives the companies that are first to deploy these products a competitive edge. Every AI-driven system relies on gathering and processing fresh data to refine its performance. Crucially, mistakes are not just inevitable but often useful. An autonomous driving system, for instance, needs data on accidents to learn faster and avoid future errors.

The probabilistic nature of AI means that old liability rules are harder to apply. Regulators will need to think in terms of thresholds: how accurate must a system be before it can be trusted to take certain decisions. Guidance to firms will be essential, as will clear information for consumers, who must be aware of the risks inherent in using such systems.

As described previously, the existing Nordic system is already well equipped to handle these kinds of challenges. Independent regulators provide expert guidance to firms and consumers, while Ombudsmen offer accessible and efficient mechanisms to obtain redress. This approach has served their citizens well, combining effective consumer protection with the flexibility to embrace new technologies for decades. Nordic policymakers now have an opportunity to improve the new EU PLD, building on their own strong tradition of public regulatory enforcement. The following policy recommendations set out how to move in that direction.

## **1. Ensure Legal Clarity Related to Digital Technologies and AI Liability through National Guidance.**

Designing a liability regime for rapidly-developing digital technologies is not easy. As explained in Chapter 3, digital technologies are inherently complex and harm often results from the interaction of multiple components making it difficult to assign responsibility to a single defective element or operator. Moreover, the longer the delay between the commercial release and the harm being noticed, the harder it becomes to accurately establish liability.

AI systems further magnify these challenges. First, it may be unclear what constitutes a defect if an AI system's actions cannot reasonably be anticipated, raising questions about how to apportion responsibility between producers and users. Second, causality is difficult to prove when there is no clear or predictable link between system design and the resulting harm.<sup>63</sup>

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<sup>63</sup> Under the new PLD, this difficulty is partially offset by new evidentiary presumptions. As explained, causality between a product defect and the damage suffered may be presumed where certain conditions are met. While this lowers the evidentiary burden for claimants, it also increases legal uncertainty for producers who may face a reversed or diluted standard of proof compared with traditional liability regimes, especially as the triggering conditions are vaguely defined.

Faced with these challenges, the new PLD brings uncertainty rather than clarity,<sup>64</sup> particularly regarding the boundaries of responsibility between operators in the supply chain and over the product's lifetime. As a result, firms exposed to extensive new litigation risk must now assess not only the technical merits of a design change but also take into account how it might be perceived in litigation, multiplying compliance costs and creating a strategic dilemma as innovation that should be considered as design evolution could be mischaracterised as an implied admission of defectiveness in a mass product liability claim.

To address these shortcomings, Nordic governments should transpose the PLD in line with existing procedural frameworks and avoid a simple copy-and-paste of the EU legislation. Firstly, safeguards must be clearly defined from the outset, whether in legislation or in official guidance. For example, Nordic legislators should set out clearly how courts should apply the principles of 'necessity' and 'proportionality' and they should also establish clear and rigorous standards for what qualifies as 'relevant' evidence.<sup>65</sup> Secondly, legislators should integrate the presumptions in the PLD into their existing legal systems with great care. They should respect the EU's legislative intent that there should be no reversal of the burden of proof. They should also recognise that these presumptions are exceptions to the general rule in Article 10(1) of the PLD, under which the burden of proof rests with the claimant. Nordic legislators should interpret these legal exceptions narrowly when transposing them into national law as they radically deviate from the general rules on burden of proof that have been a common feature of all civil law systems, including in the Nordics, for hundreds of years.

In the longer term, integrating compliance obligations into industry standards offers a more effective way to align accountability with technological realities than relying on retrospective liability alone. The Nordic countries are well positioned to accomplish this task. As described in Chapter 2, their systems are built on the strength of skilled, independent regulators and Ombudsmen that actively monitor markets for potential safety risks or legal breaches and take appropriate enforcement action to address them. Preventative measures, such as issuing advance opinions, informing consumers about risks, and working with the industry to establish a set of best practices can be particularly effective in addressing the challenges posed by complex and fast-evolving products like digital technologies and goods and services using AI capabilities.

<sup>64</sup> Consultation responses to the national transposition of the revised PLD in Sweden and Denmark emphasise the need for greater legal predictability and for a harmonised and cost-effective implementation across the EU. Several stakeholders have called on the European Commission to strengthen its efforts to ensure proportional and consistent application of the regime, including through clearer rules on legal presumptions and more restrictive disclosure practices. See: Dansk Industri (2026), Høringssvar vedrørende forslag til ny produktansvarslov, and AmCham Denmark (2026), Consultation response – Danish transposition of Directive EU 2024/2853 on liability for defective products (the EU Product Liability Directive); also see: Svensk Försäkring (2025), En ny produktansvarslag (SOU 2025:103), <https://www.regeringen.se/contentassets/e79b53bc3bfff4dec96ef8fa7c3500d9c/svensk-forsakring.pdf>

<sup>65</sup> In the context of the PLD, the principles of necessity and proportionality serve as essential safeguards during judicial orders for the disclosure of evidence. They require courts to ensure that requests for sensitive data, such as AI source code or training logs, are limited to what is strictly needed to address information asymmetries, protecting manufacturers from excessive compliance costs and the unjustified exposure of trade secrets.

## 2. Seek Interpretive Guidance from the European Commission to Ensure Harmonised Implementation

While careful national implementation is essential to align the PLD with Nordic legal and economic frameworks, its effectiveness could be undermined if other EU member states adopt divergent interpretations. A fragmented liability landscape across the EU would risk creating new barriers within the Single Market and encourage forum shopping. National efforts to ensure legal clarity should therefore be complemented by stronger coordination and a harmonised interpretation at EU level.

This is particularly significant as the PLD adds a new layer of regulatory complexity and cost at a time when the EU has explicitly committed to simplification and improving competitiveness. The European Commission has set a target of reducing administrative burdens for businesses by 25 per cent, acknowledging that the current annual burden stands at an estimated €150 billion.<sup>66</sup> The OECD estimated that 3.9 per cent of total EU employment was devoted to regulatory compliance, rising to as much as 5 per cent in some member states.<sup>67</sup> These figures matter: a heavier regulatory environment can weigh on EU competitiveness, particularly as administrative and compliance costs in other jurisdictions, such as the US, are lower. More than 60 per cent of EU firms identify business and labour market regulation as an obstacle to investment.

The EU has also contributed to this growing regulatory burden. The average length of European Commission legislative proposals has nearly doubled,<sup>68</sup> and their texts have become increasingly complex.<sup>69</sup> Moreover, compliance costs are further exacerbated by 'gold-plating', whereby member states add additional regulatory requirements beyond what is strictly required when transposing EU rules into national law, as has been observed with the implementation of PLD in some member states already.

To mitigate these risks, the Nordic governments should launch a joint initiative seeking formal interpretative guidance from the European Commission on the implementation of the PLD. Such guidance is a well-established instrument for ensuring the uniform application of EU law and would provide much-needed legal certainty for businesses across the Union. At a minimum, the guidance should address the most ambiguous and potentially disruptive elements of the Directive. This should include clarifying the precise conditions under which the new presumptions of defect and causation may be triggered, ensuring they do not result in a de facto reversal of the burden of proof. It should also set out a clear framework for the disclosure of evidence, preventing abusive or disproportionately costly requests, and harmonise key definitions to reduce litigation arising from inconsistent terminology.

<sup>66</sup> European Commission. (2025). Speech on Reducing the reporting burdens on European Business. [https://ec.europa.eu/commission/presscorner/detail/en/speech\\_25\\_873](https://ec.europa.eu/commission/presscorner/detail/en/speech_25_873)

<sup>67</sup> OECD. (2025). OECD Economic Outlook, Volume 2025 Issue 2: Resilient growth but with increasing fragilities. OECD Publishing. <https://doi.org/10.1787/9f653ca1-en>

<sup>68</sup> Marcus, J. (2024). How to achieve better EU laws. CEPS. <https://www.ceps.eu/ceps-publications/how-toachieve-better-eu-laws/>

<sup>69</sup> Hurka, S., Haag, M., & Kaplaner, C. (2021). Policy complexity in the European Union, 1993-today: Introducing the EUPLEX dataset. *Journal of European Public Policy*, 29(9), 1512–1527. <https://doi.org/10.1080/13501763.2021.1938174>

### 3. Limit Excessive Liability Exposure through Proportionate Transposition and the Development Risk Defence

Proportionality should guide the transposition of the revised PLD. In particular, Sweden, Denmark, and Finland should retain the development risk defence under Article 11 and avoid overly broad interpretations of the Directive's liability provisions.

Article 11 provides an essential safeguard for innovation by exempting producers from liability when, at the time the product was placed on the market, the state of scientific and technical knowledge made the defect undetectable.

This defence is particularly important for emerging technologies such as AI and advanced software systems where risks may only become apparent after prolonged use in varied environments. Without this safeguard, manufacturers could be held liable for defects that were objectively undetectable at the time of release, exposing them to disproportionate and unpredictable legal risks.<sup>70</sup> Moreover, producers would be forced to insure against unforeseeable risks which would drive up their costs and ultimately increase the price of their products.

If the Nordic governments were to forgo this safeguard, it would likely increase legal uncertainty and risk undermining the competitiveness of their economies. It could also discourage firms from investing in high research, development, and the early deployment of innovative technologies, due to fears of strict, retrospective liability for unknown risks. The impact of excluding the development risks defence would be particularly severe in research-intensive sectors such as pharmaceuticals and medical devices where rare defects or side effects may remain undetectable even after rigorous testing.

Finally, variations in national approaches to the development risk defence will fragment liability regimes across EU countries, encouraging forum shopping by claimants and creating uneven competitive conditions for businesses.

### 4. Clarify the Interaction between the PLD and Existing Digital and Data Laws

The Nordic countries already have robust systems that protect citizens in the digital sphere. In Sweden, for example, several frameworks regulate data processing and protection in healthcare, finance, and communications.<sup>71</sup> Finland<sup>72</sup> and Denmark<sup>73</sup> have introduced supplementary legislation to transpose GDPR obligations, regulating how personal data is processed and protected.

<sup>70</sup> Article 18 of the revised PLD allows member states to limit or exclude this defence when transposing the Directive.

<sup>71</sup> The Credit Information Act (1973:1173), the Patient Data Act (2008:355) and its associated Ordinance (2008:360), as well as the Act on Shared Health and Care Documentation (2022:913), set out detailed obligations for how data must be handled within healthcare and financial services. Similarly, the Electronic Communications Act (2022:482) and Ordinance (2022:511) regulate the handling of data in telecom and digital communications.

<sup>72</sup> Other Finnish laws concerning data privacy and protection are: the Act on Electronic Communication Services 917/2014 (Laki sähköisen viestinnän palveluista), the Act on the Protection of Privacy in Working Life 759/2004 ('Working Life Act') (Laki yksityisyyden suojasta työelämässä).

<sup>73</sup> In Denmark, data protection and processing is regulated by the GDPR as supplemented by the Danish Data Protection Act.

Against this backdrop, the PLD risks creating conflicting obligations and overlapping enforcement, placing extra strain on companies and regulators. To avoid this, Nordic governments should map and publicly clarify how the PLD interacts with the GDPR, national data protection laws, and cybersecurity regulations. For instance, it is unclear what additional legal certainty or remedial value the PLD provides by recognising data-related damage as a compensable loss given that Nordic regulators already have enforcement powers in this area. In 2003, for example, the Swedish Authority for Privacy Protection (IMY) fined Trygg Hansa three million euros<sup>74</sup> after a data breach exposed the sensitive information of about 650,000 customers.<sup>75</sup>

Moreover, the interaction between horizontal EU legislation such as the PLD and evolving sectoral rules will create additional uncertainty, affecting the spread of digital technology and AI in many sectors. For instance, medical and pharmaceutical products fall within the scope of the PLD. As a result, there is a risk of confusion between PLD and the EU's own life sciences regulations that address safety, such as the EU Medical Device Regulation and the In Vitro Diagnostic Medical Devices Regulation and in the forthcoming EU Pharmaceutical Package.

The potential downsides of placing greater emphasis on private enforcement through litigation alongside an already heavy public regulatory model are significant. Firms will face the uncertainty and increased risk of mass claims triggered by the PLD in addition to the current high costs of compliance with the EU's strict safety regulations. The interaction of the two systems will not only slow the adoption of digital technology and AI but also harm the competitiveness of the Nordic economies.

## **5. Preserve the Ombudsman-led Model as the Primary Channel for Consumer Redress**

The Nordic countries should preserve their current system of public enforcement and Ombudsman-led redress, which has provided effective oversight, encouraged cooperation between regulators and businesses and supported rapid adaptation to technological change.

As noted in the first policy recommendation, a distinctive feature of the Nordic consumer protection system is its emphasis on prevention. The Consumer Ombudsmen devote much of their resources to preventing legal breaches by providing advance opinions on request, issuing marketing guidelines, and negotiating with trade organisations on standard contract terms across industries. Although these measures are not legally binding, they are firmly established in practice.<sup>76</sup>

There is no question that the existing approach has proved effective in safeguarding consumer rights and will become even more important as digital technology including AI become more widely used. About a decade ago, the Nordic Consumer Ombudsmen jointly affirmed

<sup>74</sup> European Central Bank average exchange rate for 2023: SEK 1 = EUR 0.08712.

<sup>75</sup> IMY. (2023, September 5). Administrative fine of SEK 35 million against Trygg-Hansa. Available at: <https://www.imy.se/en/news/administrative-fine-of-sek-35-million-against-trygg-hansa/>

<sup>76</sup> Viitanen, K. (2007). Enforcement of consumers' collective interests by regulatory agencies in the Nordic countries. In C. Twigg-Flesner, D. Parry, G. Howells, & A. Nordhausen (Eds.), *Collective consumer interests and how they are served best in Europe: Legal aspects and policy issues on the border between private law and public policy* (pp. 83–103). Sellier European Law Publishers.

that consumer law applies equally online and offline.<sup>77</sup> Its main features: (1) an emphasis on prevention; (2) skilled, independent regulators and Ombudsmen; (3) regulatory enforcement and ADR as the central tools for settling disputes and providing redress; and (4) litigation as a last resort when systemic issues cannot be resolved through existing mechanisms, are well suited to a new world where the potential liability of products is inherently complex, cannot be determined in advance, and evolves over time.

## 6. CONCLUSION

The EU's PLD represents a significant turning point in European consumer protection, seeking to modernise liability rules for an economy increasingly shaped by software, AI, and digital services. While its objective is sound, its implementation poses a direct challenge to the Nordic countries' highly successful model of public regulatory enforcement. For Denmark, Finland, and Sweden, countries whose economic competitiveness is deeply rooted in innovation, a cautious transposition of the PLD is essential.

By expanding the definition of 'product' to include software, extending liability across complex supply chains, and introducing procedural changes that significantly ease the burden of proof for claimants, the Directive not only increases administrative costs but also heightens the risk of mass litigation, with potentially serious economic consequences for the Nordic countries.

The risk of increased litigation threatens to divert resources from R&D towards legal defences and compliance, discouraging the very innovation that underpins Nordic competitiveness. Our scenario analysis estimates that a shift towards a more litigious environment could reduce the market capitalisation of the top 54 Nordic innovators by between €2 billion and €7 billion. This loss would erase the equivalent of several years of combined public R&D investment in the region.

Technology-intensive industries such as ICT and life sciences, which are critical to the Nordic economies, are particularly exposed. These sectors alone face a potential loss in market value ranging from €1.3 billion to €3.8 billion, stifling growth and potentially affecting the household wealth of savers and pensioners whose investments are tied to these companies.

In transposing the PLD, Nordic policymakers have an opportunity to lead, especially as they are among the first EU member states to propose laws to implement the Directive. Rather than a mechanical implementation of the Directive, they should adapt its provisions to fit their existing institutional frameworks. This means clarifying liability rules for digital technologies, retaining crucial safeguards like the development risk defence, and, most importantly, preserving the Ombudsman-led system as the primary channel for consumer redress. By tailoring the PLD to their proven model, the Nordic countries can continue to champion both world-class innovation and robust consumer protection in the digital age.

<sup>77</sup> Finnish Competition and Consumer Authority. (2017). Nordic Consumer Ombudsmen highlight the importance of consumer protection in digital world. Available at: <https://www.kkv.fi/en/current/press-releases/nordic-consumer-ombudsmen-highlight-the-importance-of-consumer-protection-in-digital-world/>

## REFERENCES

AmCham Denmark (2026), Consultation response – Danish transposition of Directive EU 2024/2853 on liability for defective products (the EU Product Liability Directive); also see: Svensk Försäkring (2025), En ny produktansvarslag (SOU 2025:103), <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/svensk-forsakring.pdf>

APPLiA (2026), APPLiAs remissvar på betänkandet En ny produktansvarslag (SOU 2025:103), <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/applia.pdf>

ARN. Statistics. Available at: <https://www.arn.se/om-arn/statistik>

Coffee, J. C. (2015). Entrepreneurial litigation: its rise, fall, and future. Harvard University Press.

Couch, O. S., & Orent, D. J. (2026, February 2). Novo Nordisk lawsuits. Motley Rice. Available at: <https://www.motleyrice.com/diabetes-lawsuits/novo-nordisk>

Dansk Industri (2026), Høringssvar vedrørende forslag til ny produktansvarlov

Ericsson. (2019) Annual Report. Available at: <https://www.ericsson.com/495c1f/assets/local/investors/documents/2019/ericsson-annual-report-2019-en.pdf>

ElektronikBranschen (2026), ElektronikBranschens remissvar på betänkandet En ny produktansvarslag (SOU 2025:103), <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/elektronikbranschen.pdf>

Erixon, F., Guinea, O., Pandya, D., Sharma, V., Sisto, E., du Roy, O., Zilli, R., & Lamprecht, P. (2025). The Impact of Increased Mass Litigation in Europe. ECIPE, Brussels, occ. paper 3/2025, 108 p.

European Commission (2025) Consumer conditions survey. Available at: [https://commission.europa.eu/publications/2024-consumer-conditions-survey-presentations\\_en](https://commission.europa.eu/publications/2024-consumer-conditions-survey-presentations_en)

European Commission. (2025). Speech on Reducing the reporting burdens on European Business. [https://ec.europa.eu/commission/presscorner/detail/en/speech\\_25\\_873](https://ec.europa.eu/commission/presscorner/detail/en/speech_25_873)

Eurostat (2025). Gross domestic product at market prices.

Eurostat (2025). Population and population change statistics as of 1 January.

Eurostat (2026). Gross domestic expenditure on R&D (GERD) by sector of performance. Available at: [https://ec.europa.eu/eurostat/databrowser/view/rd\\_e\\_gerdtot/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/rd_e_gerdtot/default/table?lang=en)

Finansdepartementet. (2022). Skydd för konsumenters kollektiva intressen – genomförande av EU:s grupptalandirektiv (SOU 2022:42). Available at: <https://www.fi.se/contentassets/23624363779749308e614f58990a1365/remissvar-konsumenters-kollektiva-intressen-02280.pdf>

Finnish Competition and Consumer Authority. (2021). Instant credit class action: The Consumer Ombudsman's negotiations with J.W.-Yhtiöt and WestStar ended with the payment of compensation. Available at: <https://www.kkv.fi/en/current/press-releases/instant-credit-class-action-the-consumer-ombudsmans-negotiations-with-j-w-yhtiot-and-weststar-ended-with-the-payment-of-compensation/>

FCJ. (2025, February 25). Merricks-Mastercard Settlement Shows Real Winners from Class Actions. Available at: <https://fairciviljustice.org/news/the-merricks-mastercard-settlement-shows-the-real-winners-from-class-actions/>

Finnish Competition and Consumer Authority. (2017). Nordic Consumer Ombudsmen highlight the importance of consumer protection in digital world. Available at: <https://www.kkv.fi/en/current/press-releases/nordic-consumer-ombudsmen-highlight-the-importance-of-consumer-protection-in-digital-world/>

Finnish Government (2024), Budget 2025: Government proposes €3.6 billion for Ministry of Transport and Communications budget. Accessed at: <https://valtioneuvosto.fi/en/-/1410829/government-proposes-eur-3.6-billion-for-ministry-of-transport-and-communications-budget>

Försäkringsjuridiska Föreningen (2026), Remissyttrande SOU 2025:103, <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/forsakringsjuridiska-foreningen.pdf>

Galasso, A., & Luo, H. (2024). Product Liability Litigation and Innovation: Evidence from Medical Devices (NBER Working Paper No.32215). National Bureau of Economic Research. Available at: [https://www.nber.org/system/files/working\\_papers/w32215/w32215.pdf](https://www.nber.org/system/files/working_papers/w32215/w32215.pdf)

Guinea, O., Pandya, D., Sharma, V., and Zilli, R., (2025). Mass Litigation and the Future of Litigation Funding in Ireland and Europe. ECIPE. Policy Brief. Available at: <https://ecipe.org/publications/mass-litigation-ireland-and-europe/>

Guinea, O., Pandya, D., & Sharma, V. (2025). Collective Action in the Netherlands: Why It Matters for the Transposition of the Product Liability Directive. Brussels, Policy Brief 11/2025, 35 p.

Guinea, O., Pandya, D., Sharma, V., & Zilli, R. (2025). The Impact of Increased Mass Litigation in the UK. ECIPE, Brussels, occ. paper 6/2025, 78 p.

Hodges, C. (2019) Collective Redress: The Need for New Technologies. *Journal of Consumer Policy*, 42, 59-60. <https://doi.org/10.1007/s10603-018-9388-x>

Hurka, S., Haag, M., & Kaplaner, C. (2021). Policy complexity in the European Union, 1993-today: Introducing the EUPLEX dataset. *Journal of European Public Policy*, 29(9), 1512–1527. <https://doi.org/10.1080/13501763.2021.1938174>

IMF. (2025) GDP at current prices, Accessed at: <https://www.imf.org/external/datamapper/NGDPD@WEO/OEMDC/ADVEC/WEOWORLD>

IMY. (2023, September 5). Administrative fine of SEK 35 million against Trygg-Hansa. Available at: <https://www.imy.se/en/news/administrative-fine-of-sek-35-million-against-trygg-hansa/>

Kempf, E., & Spalt, O. (2020). Attracting the sharks: Corporate innovation and securities class action lawsuits. *Management Science*, 69(3), 1805–1834.

KO. (2025, January 30). Judgment in the KO – Svea Bank case. Available at: <https://www.konsumentverket.se/dom/dom-i-malet-ko-svea-bank/>

KO. (2025, February 5). Judgment in the case of the Consumer Agency – OPR Finance AB. Available at: <https://www.konsumentverket.se/dom/dom-i-malet-konsumentverket-opr-finance-ab/>

KO. (2025, March 28). Judgment in the KO – Immitec case. Available at: <https://www.konsumentverket.se/dom/dom-i-malet-ko-immitec/>

Marcus, J. (2024). How to achieve better EU laws. CEPS. <https://www.ceps.eu/ceps-publications/how-toachieve-better-eu-laws/>

McKnight, D. L., & Hinton, P. J. (2024), *Tort Costs in America: Third Edition*. US Chambers of Commerce Institute for Legal Reform.

Mitti Juridiken (2014, December 11). Compensation to thousands of consumers. Available at: <https://www.infotorgjuridik.se/premium/mittijuridiken/article210605.ece?format=print>

Nindl, E., Confraria, H., Rentocchini, F., Napolitano, L., Georgakaki, A., Ince, E., Fako, P., Tuebke, A., Gavigan, J., Hernandez Guevara, H., Pinero Mira, P., Rueda Cantuche, J., Banacloche Sanchez, S., De Prato, G. and Calza, E., *The 2023 EU Industrial R&D Investment Scoreboard*, Publications Office of the European Union, Luxembourg, 2023, doi:10.2760/506189, JRC135576

OECD. (2025). *OECD Economic Outlook, Volume 2025 Issue 2: Resilient growth but with increasing fragilities*. OECD Publishing. <https://doi.org/10.1787/9f653ca1-en>

OECD (2024) *Survey on Drivers of Trust in Public Institutions – 2024 Results*. Available at: [https://www.oecd.org/en/publications/oecd-survey-on-drivers-of-trust-in-public-institutions-2024-results\\_ga20554b-en.html](https://www.oecd.org/en/publications/oecd-survey-on-drivers-of-trust-in-public-institutions-2024-results_ga20554b-en.html)

OECD. (2023). Share of households and NPISHs' currency and deposits, debt securities, equity, investment fund shares, life insurance and annuity entitlements and pension entitlements as a percentage of their total financial assets.

Rolander, N. (2024), Sweden Announces Increased Health Care Funding in 2025 Budget. Bloomberg. Accessed at: <https://www.bloomberg.com/news/articles/2024-09-06/sweden-announces-increased-health-care-funding-in-2025-budget>

Stadler, A. (2021) Are Class Actions Finally (Re)conquering Europe? Available at: [https://www.juridicainternational.eu/public/pdf/ji\\_2021\\_30\\_14.pdf](https://www.juridicainternational.eu/public/pdf/ji_2021_30_14.pdf)

Statistics Denmark (2023). Expenditure on education. Accessed at: <https://www.dst.dk/en/Statistik/emner/oekonomi/offentlig-oekonomi/udgifter-til-uddannelse>

Sunstein, C. R., Hastie, R., Payne, J. W., Schkade, D. A., & Viscusi, W. K. (2008). Punitive damages: How juries decide. University of Chicago Press.

Svensk Handel (2026), Yttrande över En ny produktansvarslag, SOU 2025:103, <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/svensk-handel.pdf>

Svensk Försäkring (2025), En ny produktansvarslag (SOU 2025:103), <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/svensk-forsakring.pdf>

Swedish MedTech (2026), Remissvar avseende betänkandet En ny produktansvarslag (SOU 2025:103), <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/swedish-medtech.pdf>

Swiss Re Institute. (2024). Social inflation: Litigation costs rise as societal trends reshape the liability landscape (Sigma No. 4/2024). Available at: <https://www.swissre.com/institute/research/sigma-research/sigma-2024-04-social-inflation.html>

Teknikföretagen (2026), Remissvar – En ny produktansvarslag (SOU 2025:103), <https://www.regeringen.se/contentassets/e79b53bc3bff4dec96ef8fa7c3500d9c/teknikforetagen.pdf>

Thomasen, K. (2021). AI and tort law. In F. Martin-Bariteau & T. Scassa (Eds.), Artificial intelligence and the law in Canada. ON: LexisNexis Canada.

Thomsen, S. (2016). Nordic corporate governance revisited. Nordic Journal of Business, 65(1). Available at: <http://njb.fi/wp-content/uploads/2016/03/Thomsen.pdf>

U.S. House of Representatives. (1995). Private Securities Litigation Reform Act of 1995: Conference report to accompany H.R. 1058 (H.R. Rep. No. 104-369). U.S. Government Printing Office.

Viscusi, W. K., & Moore, M. J. (1993). Product liability, research and development, and innovation. *Journal of Political Economy*, 101(1), 161-184.

Viitanen, K. (2007). Enforcement of consumers' collective interests by regulatory agencies in the Nordic countries. In C. Twigg-Flesner, D. Parry, G. Howells, & A. Nordhausen (Eds.), *Collective consumer interests and how they are served best in Europe: Legal aspects and policy issues on the border between private law and public policy* (pp. 83–103). Sellier European Law Publishers.

Voet, S., & Dethier, S. (2023). Bridging the EU Consumer Enforcement Pathways in Mass Harm Situations. In *Alternative Dispute Resolution as an Effective System of Consumer Protection in Slovakia (ADR-ESOC)* at the University of Presov, organised by the Society for Consumer Protection (SOS) Popra, Location: online.

World Bank (2020), *Doing Business in Europe*. Accessed at: <https://archive.doingbusiness.org/content/dam/doingBusiness/media/Profiles/Regional/DB2020/EU.pdf>

World Intellectual Property Organization (2025). *Global Innovation Index 2025*. Available at: <https://www.wipo.int/web-publications/global-innovation-index-2025/assets/80937/global-innovation-index-2025-en.pdf>

## **ANNEX 1: THE ROLE OF THE OMBUDSMEN IN THE NORDIC COUNTRIES AND THE USE OF COLLECTIVE ACTIONS**

A distinctive feature of regulatory enforcement in the Nordic countries is the prevalence of Ombudsmen which were first established in Sweden in 1809 to protect individuals from state maladministration, and later adopted by Finland in 1919 and Denmark in 1955. Today, the Nordics feature a broad network of Ombudsmen each with a specific mandate and powers, such as the Parliamentary Ombudsman, the Data Protection Ombudsman, and the Ombudsman for Children.

Among this network of Ombudsmen, the Consumer Ombudsman stands out as the main pillar of consumer redress in the Nordic countries. Operating at the intersection of regulation and dispute resolution, it combines powers to police markets, confront firms engaged in wrongdoing, and design alternative dispute resolution schemes that allow individuals and companies to settle claims without resorting to litigation.

The next sections shortly present the Consumer Ombudsman in Denmark, Finland and Sweden, outlining how each operates and where their power lies. Each section concludes with case studies that illustrate the Ombudsman's interventions in practice.

### **Consumer Ombudsman in Denmark**

Established in 1975 to enforce the Marketing Practices Act (adopted in 1974), the mandate of the Danish Consumer Ombudsman has expanded over time. Today, the Consumer Ombudsman oversees compliance with the Marketing Practices Act, the E-Commerce Act, the Tobacco Advertising Act, the Legal Advice Act, and a range of consumer protection provisions in both the Payments Act and the Services in the Internal Market Act and holds special enforcement powers in the financial sector.

The Danish Consumer Ombudsman operates according to three core principles. First is the negotiation principle under the Marketing Practices Act: when negotiations with a trader fail, the Ombudsman may escalate the matter through legal action. Second, the requirement to uphold good marketing practice enables the Ombudsman to enforce consumer protection provisions found in other legislation. Third, the Consumer Ombudsman places strong emphasis on prevention by providing ongoing information and guidance to traders. This includes regularly issuing guidelines and interpretative materials developed in collaboration with business and consumer organisations to clarify how the rules apply across different sectors.

Under Denmark's Administration of Justice Act (Chapter 23a), collective actions follow an opt-in model by default, requiring individuals to actively join the case. The opt-out mechanism is strictly exceptional and may only be used by the Consumer Ombudsman under two specific conditions. First, the claims must be so small, typically under DKK 2,000, that they would not realistically be pursued through individual actions. Second, an opt-in model must be deemed unsuitable, particularly where the class includes such a large number of individuals that managing opt-in procedures would require a disproportionate use of resources.

**BOX 1: DENMARK CASE STUDY**

In 2022, the Danish Consumer Ombudsman received a complaint about an energy company's decision to convert consumers' fixed-price electricity and natural gas agreements into variable-price contracts. These agreements had originally been concluded for a two-year term. Nevertheless, in August 2022, the company announced that the change would take effect from November – even for contracts that had entered into force just five months earlier. The company justified the decision by citing "quite exceptional market conditions."

However, the Consumer Ombudsman found that the amendment clause in the company's supply terms did not comply with the transparency requirement in section 38b(2) of the Contracts Act. The clause gave the company an unlimited right to alter contract terms without specifying the circumstances that would justify such changes. The Ombudsman concluded that this right was vague, unjustified, and created a significant imbalance between the parties' rights and obligations, to the consumer's disadvantage. As a result, the company was not permitted to unilaterally change its customers' electricity and gas contracts from a fixed price to a variable one.

**Consumer Ombudsman in Finland**

The Finnish Consumer Ombudsman Authority operates within the Finnish Competition and Consumer Authority (FCCA), with the Director General of the FCCA serving as Ombudsman. The Finnish Consumer Ombudsman has the authority to submit applications for injunctions in consumer matters before the Finnish Market Court – a specialised judicial body responsible for cases involving competition law, public procurement, and consumer disputes. If the Consumer Ombudsman declines to act, a registered association representing one of the parties may submit a petition.

Collective actions were introduced in Finland in 2007, but their use is strictly limited to public proceedings. Only the Consumer Ombudsman, the state authority responsible for safeguarding consumer interests, is permitted to initiate such actions. The legislation applies exclusively to consumer disputes within the jurisdiction of the Consumer Ombudsmen, excluding cases related to securities issuers, public purchase offers, and environmental damage, all of which fall outside the scope of the Act on Class Actions (444/2007).

The rationale for restricting the right to bring collective actions to the Consumer Ombudsman alone was to "diminish suspicions concerning the possible misuse of the new act" and to "ensure that actions could not be initiated for purposes of blackmail or reputational harm."<sup>78</sup> The underlying principle is that the intermediary, in this case, the Consumer Ombudsman, must be a trusted, impartial actor, exercising redress powers independently and in the public interest.

<sup>78</sup> Voet, S., & Dethier, S. (2023). Bridging the EU Consumer Enforcement Pathways in Mass Harm Situations. In *Alternative Dispute Resolution as an Effective System of Consumer Protection in Slovakia (ADR-ESOC)* at the University of Presov, organised by the Society for Consumer Protection (SOS) Popra, Location: online.

**BOX 2: FINLAND CASE STUDY**

In early 2016, the Finnish Consumer Ombudsman received a wave of complaints after Caruna, a regional electricity transmission monopoly, announced significant price increases effective from 1 March. As electricity is a basic necessity and Caruna's customers had no alternative provider, the proposed hikes, well above the generally accepted 10-15 per cent threshold, raised serious consumer protection concerns.

As part of its mandate to monitor contract terms in regulated utility markets, the Ombudsman entered into negotiations with Caruna. By late February, a settlement was reached: Caruna agreed to withdraw the planned increases, reduce fixed basic charges by 25 per cent for one year, and freeze further hikes in 2017. This ensured that the average annual increase in transmission costs remained below 15 per cent.

**Consumer Ombudsman in Sweden**

The Swedish Consumer Agency oversees consumer protection, while the National Board for Consumer Disputes (ARN) handles consumer complaints outside the court system. The Director-General of the Consumer Agency also serves as the Consumer Ombudsman.

The Consumer Ombudsman has the authority to represent individual consumers in legal proceedings before ordinary courts in disputes with business operators. However, such intervention is subject to specific conditions: the case must be of particular importance for legal development or interpretation, and there must be a broader consumer interest in having the matter heard in court.<sup>79</sup>

The RAD has been formally implemented and has formed part of Swedish law since 2024. Representatives in such actions must be approved by a state authority, with the current list limited to the Swedish National Board for Consumer Disputes (ARN) and the Consumer Ombudsman.

<sup>79</sup> Lag (2011:1211) om Konsumentombudsmannens medverkan i vissa tvister (Act on Participation of the Consumer Ombudsman in certain disputes)

**BOX 3: SWEDEN CASE STUDY**

In the case of Swedish Consumer Agency<sup>80</sup> v. Save Lives Now EU AB, concerning a breach of the Personal Protective Equipment (PPE) Regulation, the Administrative Court upheld the Agency's decision to prohibit the sale of visibility products with LED lighting classified as PPE. The Agency found that the products had been CE marked in violation of the EU PPE Regulation, as they had not undergone the required EU type-approval process.

The 2022 ruling not only banned further sales but also ordered the company to withdraw the products from all retailers, submit a list of retailers in Sweden and Finland, and report the number of returned items. The enforcement order was accompanied by a conditional fine of €112,896.<sup>81</sup> The company failed to comply and challenged the decision, but the court ruled that the Agency's actions were justified. It found that the company was required to conduct type testing, and that CE marking the products without doing so constituted a clear breach of the Regulation.

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<sup>80</sup> The Swedish Consumer Agency (Konsumentverket) serves as the central authority for consumer issues and advice in Sweden. It collaborates closely with the European Consumer Centre Sweden (Konsument Europa), which operates as a unit within the Agency. The Swedish Consumer Agency becomes important as the Director of the agency serves as the Consumer Ombuds body.

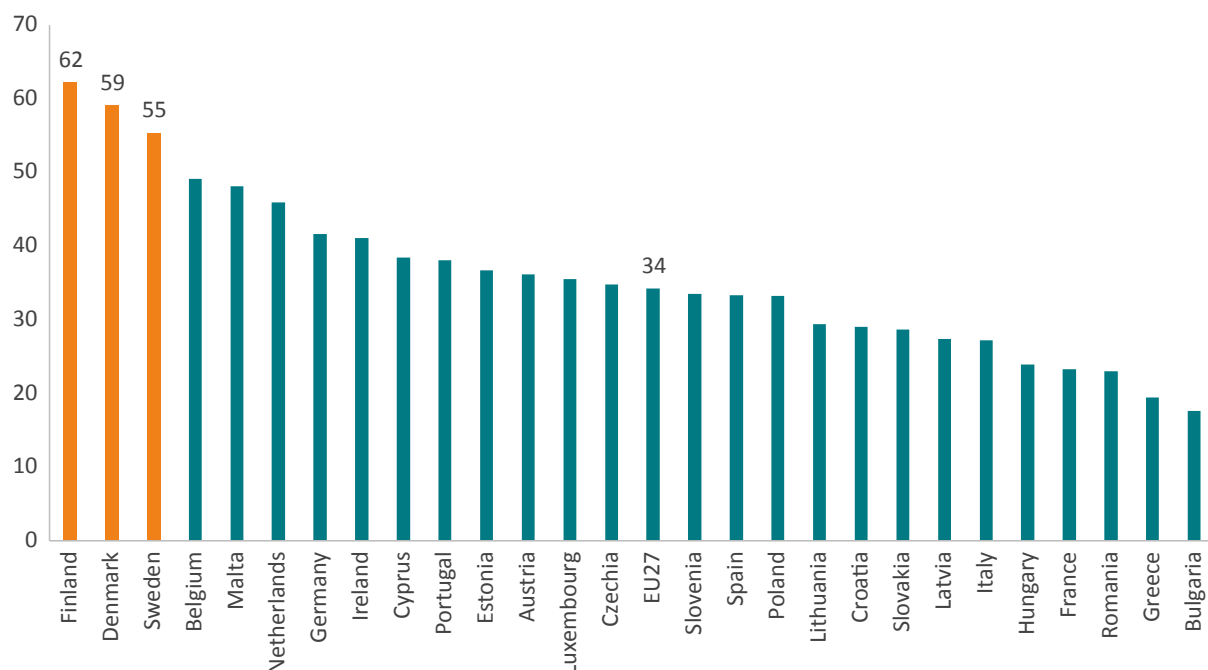
<sup>81</sup> European Central Bank average exchange rate for 2022: SEK 1 = EUR 0.09408.

## ANNEX 2: THE IMPORTANCE OF INNOVATION IN THE NORDIC ECONOMIES

The Nordic economies are more technologically advanced than many other EU countries and are home to world-class companies at the forefront of innovation. It is, therefore, only natural that these countries should be especially concerned about the potential impact of the new PLD on innovation.

For example, Denmark, Finland, and Sweden are significantly more digitally advanced than the other EU member states. This is evident from Eurostat's Digital Intensity Index,<sup>82</sup> as shown in Figure 1. In 2024, the three countries had the highest share of enterprises with high or very high digital intensity in the EU.<sup>83</sup> In all three cases, more than 50 per cent of enterprises fell into this category, indicating that a majority of businesses in each country were digitally intensive users of digital technology.

**FIGURE 1: SHARE OF ENTERPRISES WITH HIGH AND VERY HIGH DIGITAL INTENSITIES (2024)**



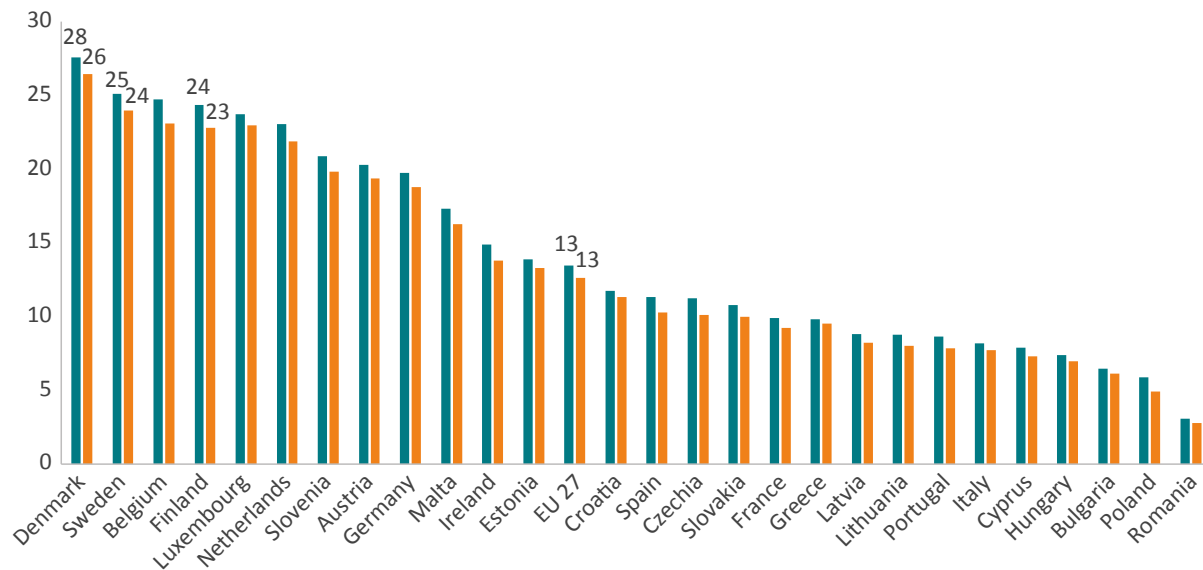
Source: Author's calculations based on Eurostat data.

<sup>82</sup> The digital intensity index (DII) is a composite indicator, derived from the EU survey on ICT usage and e-commerce in enterprises. The indicator is calculated based on 12 variables, with each of the variables having a score of 1 point. The DII distinguishes 4 levels of digital intensity for each enterprise: 0-3 points: very low, 4-6 points: low, 7-9 points: high, 10-12 points: very high.

<sup>83</sup> The Nordics leading position in digitalisation is reflected across firm sizes. Finland (61 per cent), Denmark (58 per cent), and Sweden (54 per cent) had the highest share of high and very high digital Small and medium-sized enterprises (SMEs), and much higher than the EU's score of 33 per cent.

These trends are also reflected in AI adoption. When looking at the share of firms using at least one type of AI technology,<sup>84</sup> Denmark, Sweden, and Finland rank first, second, and fourth, respectively, with Belgium in third place (see Figure 2). In all three Nordic countries, the adoption rate was nearly double the EU average of 13 per cent. Among SMEs, Denmark and Sweden also lead, with 26 and 24 per cent of SMEs using at least one AI technology, respectively. Finland ranks fifth, with an adoption rate of 23 per cent.

**FIGURE 2: SHARE OF FIRMS USING AT LEAST ONE TYPE OF AI TECHNOLOGY (2024)**



Source: Author's calculations based on Eurostat data.

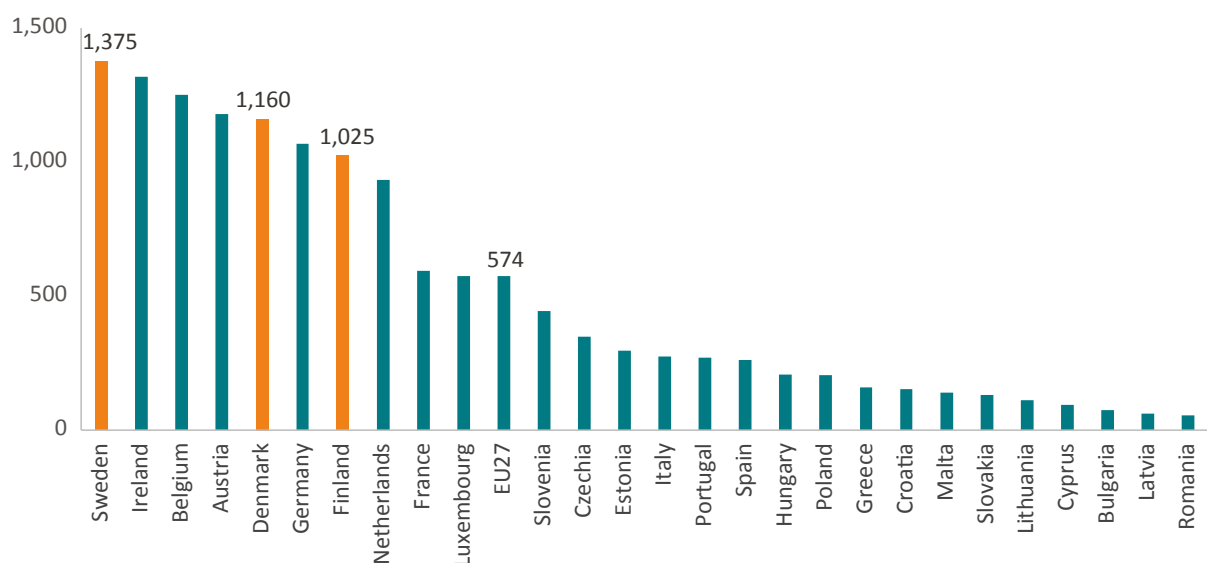
These results are unsurprising when viewed alongside the level of R&D investment in these three countries. Figure 3 shows that in 2023, Denmark and Sweden recorded the highest gross domestic R&D expenditure per capita, amounting to €1,981 and €1,894, respectively. Although slightly lower, Finland's R&D expenditure per capita was still well above the EU average, at €1,517 compared to €861.

<sup>84</sup> AI technologies considered by the Eurostat database include: AI technologies performing analysis of written language, AI technologies converting spoken language into machine-readable format, AI technologies generating written or spoken language (natural language generation), AI technologies identifying objects or persons based on images (image recognition, image processing), machine learning (e.g. deep learning) for data analysis, AI technologies automating different workflows or assisting in decision making (AI based software robotic process automation), AI technologies enabling physical movement of machines via autonomous decisions based on observation of surroundings (autonomous robots, self-driving vehicles, autonomous drones), AI technologies for marketing or sales, AI technologies for production processes, AI technologies for organisation of business administration processes, AI technologies for management of enterprises, AI technologies for logistics, AI technologies for ICT security, AI technologies for human resources management or recruiting, AI technologies for organisation of business administration processes or management, AI technologies for accounting, controlling or finance management, AI technologies for research and development (R&D) or innovation activity.

**FIGURE 3: GROSS EXPENDITURE ON R&D PER CAPITA (2023)**

Source: Author's calculations based on Eurostat data.

Moreover, Sweden, Denmark, and Finland also recorded high levels of business R&D expenditure per capita in 2023 (see Figure 4). Sweden had the highest figure among EU countries, at €1,375. Denmark and Finland ranked fifth and seventh, with per capita expenditures of €1,160 and €1,025, respectively, and again significantly above the EU average.

**FIGURE 4: GROSS BUSINESS EXPENDITURE ON R&D PER CAPITA (2023)**

Source: Author's calculations based on Eurostat data.

At the same time, heavy users of digital technologies such as life sciences and ICT – which due to the expansion of liability to digital services will be directly affected by the implementation of the new PLD – are key contributors to the Nordic economies.

Table 1 highlights the role of these sectors across several economic indicators, including value added, labour productivity, employment, and wages. In Denmark, Finland, and Sweden, the combined value added of the two sectors accounts for around 6 per cent of GDP. In terms of employment and wages, they represent approximately 12 and 17.5 per cent of the total economy, respectively. Notably, in all three countries, the share of wages in these sectors exceeds their share of employment, indicating that they offer higher-than-average salaries. Finally, with the exception of the ICT sector in Denmark, labour productivity in both sectors was higher than the average across the entire economy.

**TABLE 1: SECTORAL ECONOMIC INDICATORS (2022)**

| Country | Sectors                     | Value added<br>(share of GDP) | Labour productivity (thousand<br>euro per person<br>employed) | Share of people<br>employed | Share of wages |
|---------|-----------------------------|-------------------------------|---------------------------------------------------------------|-----------------------------|----------------|
| Denmark | Life sciences               | 2.9%                          | 356                                                           | 1.4%                        | 2.8%           |
|         | ICT                         | 3.4%                          | 98                                                            | 6.0%                        | 8.2%           |
| Finland | Life sciences <sup>85</sup> | 0.5%                          | 240                                                           | 0.3%                        | 0.4%           |
|         | ICT                         | 4.3%                          | 99                                                            | 6.5%                        | 9.3%           |
| Sweden  | Life sciences               | 1.3%                          | 447                                                           | 0.4%                        | 0.7%           |
|         | ICT                         | 5.4%                          | 117                                                           | 6.5%                        | 9.7%           |

Source: Source: Author's calculations based on Eurostat data. The labour productivity of the entire economy in 2022 was 102.26 in Denmark, 75.93 in Finland, and 95.48 in Sweden thousand euros per person employed.

<sup>85</sup> The life sciences sector for Finland uses 2021 data due to missing data for 2022.

## ANNEX 3: METHODOLOGY OF THE SCENARIO-BASED ANALYSIS

The methodology uses three scenarios to assess the impact of private enforcement in the Nordic countries. The scenarios depict three possibilities regarding the scale of mass litigation in Denmark, Finland, and Sweden compared to the US.

**TABLE 1: SCENARIOS FOR ECONOMIC MODELLING**

| Scenario               | Proportion of the effects in the US economy found in empirical studies to be applied to the Danish, Finnish, and Swedish economy |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Low Growth Scenario    | 10 per cent                                                                                                                      |
| Medium Growth Scenario | 20 per cent                                                                                                                      |
| High Growth Scenario   | 30 per cent                                                                                                                      |

The scenarios provide a methodology for investigating the impact of private enforcement on the three Nordic economy based on empirical studies carried out on the US economy. To assess the impact, economic variables are chosen for which the impact of mass litigation in the US is available.

For instance, in order to estimate the impact of mass litigation on innovation in the Nordic countries, our study looks at the estimate from Kempf and Spalt (2020) of a 2.8 per cent fall in market capitalisation of highly innovative US companies.

The scenarios analysis can help assess the impact of mass litigation on two kinds of variables: level estimates (showing the absolute value of an indicator) and growth rates (showing how quickly an indicator changes over time). Both use slightly different formulas. Level estimates have been used to calculate the impact of mass litigation on two variables: innovation (as seen in Chapter 4) and GDP (as seen in Annex 4). Growth rates have been used to estimate the impact of mass litigation on litigation costs (as seen in Annex 4). The two analyses are illustrated below:

### Level estimates (absolute value of an indicator)

Empirical literature on private enforcement in the US provides us with data on the cost of mass litigation as a share of an economic variable in the US. The US value ( $X$ ) is, therefore, a percentage share of an economic variable  $Y$ . In order to estimate the cost of mass litigation as a share of the same variable  $Y$  for Denmark, we employ the scenarios analysis.

For the three scenarios, we assume that the cost of mass litigation as a share of  $Y$  in Denmark is 10 per cent, 20 per cent and 30 per cent of the share in the US ( $X$ ). Or, for instance, in the Low Growth Scenario, cost of mass litigation as a share of would be 10 per cent of the share in the US ( $X$ ). Or mathematically,

$$\text{cost of mass litigation as a share of } Y_{(Denmark) (low)} = \frac{10}{100} \times X$$

Similarly, for the Medium Growth Scenario,

$$\text{cost of mass litigation as a share of } Y_{(Denmark) (medium)} = \frac{20}{100} \times X$$

And for the High Growth Scenario,

$$\text{cost of mass litigation as a share of } Y_{(Denmark) (high)} = \frac{30}{100} \times X$$

The 2024 EU Industrial R&D Investment Scoreboard data also provides us with the value of Y in Denmark. Using this, we estimate the actual cost of mass litigation in Denmark. For example, in the Low Growth Scenario, the actual cost of mass litigation would be:

$$\text{Cost of mass litigation}_{(Denmark)(low)} = \left( \frac{\frac{10}{100} \times X}{100} \times Y_{(Denmark)} \right)$$

Similarly, for the Medium Growth Scenario,

$$\text{Cost of mass litigation}_{(Denmark)(medium)} = \left( \frac{\frac{20}{100} \times X}{100} \times Y_{(Denmark)} \right)$$

And for the High Growth Scenario,

$$\text{Cost of mass litigation}_{(Denmark)(high)} = \left( \frac{\frac{30}{100} \times X}{100} \times Y_{(Denmark)} \right)$$

As an illustrative example, consider the cost of private enforcement on market capitalisation of innovative companies (Y). Empirical literature provides us with the value of the fall in market capitalisation of innovative companies facing mass litigation, which is 2.8 per cent, or  $X=2.8\%$ . The fall in market capitalisation of innovative Danish companies as a result of mass litigation in the three scenarios will then be 10 per cent, 20 per cent and 30 per cent of 2.8. Or mathematically,

Low Growth Scenario,

$$\text{cost of mass litigation as a share of } Y_{(Denmark) (low)} = \frac{10}{100} \times 2.8$$

Medium Growth Scenario,

$$\text{cost of mass litigation as a share of } Y_{(Denmark) (medium)} = \frac{20}{100} \times 2.8$$

High Growth Scenario,

$$\text{cost of mass litigation as a share of } Y_{(Denmark)(high)} = \frac{30}{100} \times 2.8$$

We also have the value of the total market capitalisation of the top Danish innovative companies which was €468.2 billion. Or,  $Y_{(Denmark)} = \text{EUR } 468.2 \text{ billion}$ . Plugging this value into the formula to estimate the actual cost of mass litigation in Denmark gives us the following results:

Low Growth Scenario,

$$\text{Cost of mass litigation}_{(Denmark)(low)} = \left( \frac{\frac{10}{100} \times 2.8}{100} \times 468.2 \right) = \text{EUR } 1.31 \text{ billion}$$

Medium Growth Scenario,

$$\text{Cost of mass litigation}_{(Denmark)(medium)} = \left( \frac{\frac{20}{100} \times 2.8}{100} \times 468.2 \right) = \text{EUR } 2.62 \text{ billion}$$

High Growth Scenario,

$$\text{Cost of mass litigation}_{(Denmark)(high)} = \left( \frac{\frac{30}{100} \times 2.1}{100} \times 468.2 \right) = \text{EUR } 3.93 \text{ billion}$$

Or, based on the scenario-based analysis, private enforcement could lead to a fall of €1.31 billion, €2.62 billion, and €3.93 billion in the total market capitalisation of Denmark's top innovative companies in the three scenarios, respectively.

### **Growth rate estimates (change in the indicator value over time)**

Empirical literature on private enforcement in the US provides us with data related to the increase/decrease in a particular variable due to mass litigation. The US value is, therefore, a percentage increase or decrease. In order to estimate the increase/decrease of the same variable for Denmark, Finland, and Sweden as a result of mass litigation, we employ the scenarios analysis.

Taking the example of Denmark, for the three scenarios, we assume that the increase/decrease of the variable in Denmark is 10 per cent, 20 per cent and 30 per cent of the increase/decrease in the US. Assuming that because of mass litigation, variable  $Y$  has increased by  $X$  per cent in the US, then, in the Low Growth Scenario, because of mass litigation in Denmark,  $Y$  would increase by 10 per cent of  $X$ . Or mathematically,

Low Growth Scenario,

$$\Delta Y\%_{(Denmark)(low)} = \frac{10}{100} \times X$$

Similarly, for the Medium Growth Scenario,

$$\Delta Y\%_{(Denmark)(medium)} = \frac{20}{100} \times X$$

And for the High Growth Scenario,

$$\Delta Y\%_{(Denmark)(high)} = \frac{30}{100} \times X$$

World Bank data also provides us with the value of  $Y$  (e.g., litigation cost) in Denmark. Using this, we estimate the new increased value of the  $Y$  in Denmark for the three scenarios because of mass litigation in Denmark. For example, in the Low Growth Scenario, the increased value of  $Y$  would be:

$$Y_{(Denmark\ new)(low)} = \left( \frac{\frac{10}{100} \times X}{100} \times Y_{(Denmark)} \right) + Y_{(Denmark)}$$

Similarly, for the Medium Growth Scenario,

$$Y_{(Denmark\ new)(medium)} = \left( \frac{\frac{20}{100} \times X}{100} \times Y_{(Denmark)} \right) + Y_{(Denmark)}$$

And for the High Growth Scenario,

$$Y_{(Denmark\ new)(high)} = \left( \frac{\frac{30}{100} \times X}{100} \times Y_{(Denmark)} \right) + Y_{(Denmark)}$$

As an illustrative example, consider litigation costs (scenario analysis for litigation costs can be found in Annex 4). Empirical literature provides us with the impact of private enforcement on litigation costs in the US. Collective actions are associated with a 51 per cent increase in litigation costs or  $X=51\%$ . The increase in litigation costs ( $Y$ ) in Denmark based on the three scenarios will be as follows:

Low Growth Scenario,

$$\Delta Y\%_{(Denmark)(low)} = \frac{10}{100} \times 51 = 5.1\%$$

Medium Growth Scenario,

$$\Delta Y\%_{(Denmark)(medium)} = \frac{20}{100} \times 51 = 10.2\%$$

High Growth Scenario,

$$\Delta Y\%_{(Denmark)(high)} = \frac{30}{100} \times 51 = 15.3\%$$

We also have the value of litigation costs (Y) in Denmark which was 23.3 per cent of the claim value. Or,  $Y_{(Denmark)} = 23.3$ . Plugging this value into the formula to estimate the new value of litigation costs in Ireland as a result of mass litigation gives us the following results:

Low Growth Scenario,

$$Y_{(Denmark\ new)(low)} = \left( \frac{\frac{10}{100} \times 51}{100} \times 23.3 \right) + 23.3 = 24.5$$

Medium Growth Scenario,

$$Y_{(Denmark\ new)(medium)} = \left( \frac{\frac{20}{100} \times 51}{100} \times 23.3 \right) + 23.3 = 25.7$$

High Growth Scenario,

$$Y_{(Denmark\ new)(high)} = \left( \frac{\frac{30}{100} \times 51}{100} \times 23.3 \right) + 23.3 = 26.9$$

Or, applying the scenario-based analysis, litigation costs in Denmark increased by 5.1, 10.2, and 15.3 per cent due to mass litigation. As a percentage of the claim value, litigation costs could increase by 24.5, 25.7, and 26.9 per cent.

## ANNEX 4: THE IMPACT OF MASS LITIGATION ON THE NORDIC ECONOMIES

Using the scenario analysis, in addition to the impact of mass litigation on innovation, we can also estimate the impact of mass litigation on additional economic variables for Denmark, Finland, and Sweden. These include the impact on litigation costs and GDP. It is important to note here, that this study uses data from 2022 for the US variables as found in McKnight, D. L., & Hinton, P. J. (2024). The earlier ECIPE study on 'The Impact of Mass Litigation in the EU (2024) uses data from 2011 as found in McKnight, D. L., & Hinton, P. J. (2013).

### Litigation Costs

Between 2016 and 2022, tort costs in the US increased by 51 per cent.<sup>86</sup> According to the World Bank's Doing Business in Europe (2020) report<sup>87</sup> litigation costs as a share of the claim value in Denmark, Finland, and Sweden amounted to respectively 23.3, 16.2, and 30.4 per cent of the claim value in 2020.<sup>88</sup>

Using the scenario analysis methodology, we apply the 51 per cent increase in US tort costs over time to the three scenarios – Low (10 per cent), Medium (20 per cent) and High (30 per cent) growth scenarios – for each of the three Nordic countries. The resulting estimates are 5.1, 10.2 and 15.3 per cent (representing 10, 20, and 30 per cent of the 51 per cent figure respectively). Applying the projected growth rates of 5.1, 10.2, and 15.3 per cent to the values of the three Nordic countries, we find the following litigation costs as a share of the claim value presented in Table 1.

<sup>86</sup> McKnight, D. L., & Hinton, P. J. (2024), Tort Costs in America: Third Edition. US Chambers of Commerce Institute for Legal Reform.

<sup>87</sup> World Bank (2020), Doing Business in Europe. Accessed at: <https://archive.doingbusiness.org/content/dam/doingBusiness/media/Profiles/Regional/DB2020/EU.pdf>. It measures the average of attorney costs, court costs and enforcement costs as a share of claim value. The indicator focuses specifically on commercial litigation, including class actions and non-class actions.

<sup>88</sup> The chosen variable includes a note of caution. The estimates for litigation costs from the McKnight & Hinton 2024 study not only include the costs of the tort system but also the compensation amounts awarded. Meanwhile, the Nordic estimates for this indicator only estimate the litigation costs and not the compensation values. Nonetheless, the estimates for the US are the most recent and the most similar estimates we were able to find through our literature review for the scenario-based analysis. Moreover, since the scenario-based analysis is only estimating an approximate impact of the increase in private litigation in the three Nordic countries, the estimates for the US provide us with a viable answer.

**TABLE 1: INCREASE IN LITIGATION COSTS BASED ON SCENARIO-BASED ANALYSIS (AS A SHARE OF THE CLAIM VALUE)**

| Country | Actual | Low Growth Scenario (%) | Medium Growth Scenario (%) | High Growth Scenario (%) |
|---------|--------|-------------------------|----------------------------|--------------------------|
| Denmark | 23.3   | 24.5                    | 25.7                       | 26.9                     |
| Finland | 16.2   | 17.0                    | 17.9                       | 18.7                     |
| Sweden  | 30.4   | 32.0                    | 33.5                       | 35.1                     |
| EU      | 20.3   | 22.6                    | 24.8                       | 27.1                     |

Source: Author's calculations based on World Bank, Doing Business in Europe (2020). Note: The World Bank has discontinued the publication of this report, replacing it with Business Ready; however, not all EU economies are currently included in the new assessment.

These results are important particularly for Sweden which, in 2020, recorded the second highest litigation costs of all EU member countries following the Czech Republic.

### Private Enforcement Costs for Businesses

In 2022, the costs and compensation payouts of the US tort system as a share of GDP was 2.1 per cent. Table 2 estimates the cost of private enforcement as a share of the Danish, Finnish, and Swedish GDP.<sup>89</sup> 10, 20 and 30 per cent of 2.1 is equal to 0.21, 0.42, and 0.63 per cent. Denmark, Finland, and Sweden had GDP amounting to €392.4 billion, €275.9 billion, and €599.1 billion in 2024. The estimates for the three scenarios are presented below.

**TABLE 2: COST OF PRIVATE ENFORCEMENT AS A SHARE OF GDP BASED ON SCENARIO-BASED ANALYSIS**

| Country | Actual Value (€ billion) | Low Growth Scenario (€ billion) | Medium Growth Scenario (€ billion) | High Growth Scenario (€ billion) |
|---------|--------------------------|---------------------------------|------------------------------------|----------------------------------|
| Denmark | 392.4                    | 0.82                            | 1.65                               | 2.47                             |
| Finland | 275.9                    | 0.58                            | 1.16                               | 1.74                             |
| Sweden  | 599.1                    | 1.26                            | 2.52                               | 3.77                             |

Source: Author's calculations based on Eurostat data on GDP 2024.

To put these figures into perspective, the Danish budget in 2023 for higher education was €0.56 billion.<sup>90</sup> The cost of private litigation in the lowest scenario is higher than this value, and the

<sup>89</sup> McKnight, D. L., & Hinton, P. J. (2024). Tort Costs in America: Third Edition. US Chambers of Commerce Institute for Legal Reform. The study defines tort costs as the aggregate amount of judgments, settlements, and legal and administrative costs to adjudicate private claims and enforcement actions. The costs of the tort system also include the portion of liability insurance premiums used to pay administrative expenses and overheads and contribute to the profits of insurers.

<sup>90</sup> Statistics Denmark (2023). Expenditure on education. Accessed at: <https://www.dst.dk/en/Statistik/emner/oekonomi/offentlig-oekonomi/udgifter-til-uddannelse>

results for the high growth scenario are more than four times this budget. Similarly, in Finland, the cost of private litigation in the high growth scenario is higher than the 2025 budget appointed for basic transport infrastructure management of €1.5 billion.<sup>91</sup> In Sweden, the medium growth scenario result was 1.5 times Sweden's 2025 health budget of €1.6 billion and the high growth scenario was more than twice this amount.<sup>92</sup>

## Data Sources

### US values

US values for the scenario analysis were collected from empirical literature on the impact of mass litigation on economic variables in the US. The table below provides the source, modifications, and the final numbers used in the analysis for the US.

**TABLE 3: US DATA SOURCES**

| Variable                                    | US estimate from literature                                                                                     | Modification                                                                              | Final US value | Source                                  |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------|-----------------------------------------|
| Cost of private enforcement as share of GDP | Costs and compensations of the US tort system as a share of the GDP was 2.1%                                    | Using 2.1% as the cost of mass litigation as a share of the US GDP                        | 2.1 %          | McKnight, D. L., & Hinton, P. J. (2024) |
| Increase in cost of litigation              | Increase in total US tort costs between 2016 to 2022 was 51%                                                    | Using 51% as the increase in litigation costs over time                                   | 51%            | McKnight, D. L., & Hinton, P. J. (2024) |
| Cost on innovation                          | Drop in market value of innovative companies in the short term after the filing of a class action suit was 2.8% | Using 2.8% as the decrease in market value of innovative companies due to mass litigation | 2.8%           | Kempf, E., & Spalt, O. (2020)           |

### Nordic values

Values for Denmark, Finland, and Sweden for the scenario-based analysis were collected from international databases as well as Eurostat data. The exact sources of the values used in the analysis can be found in the table below.

<sup>91</sup> Finnish Government (2024), Budget 2025: Government proposes €3.6 billion for Ministry of Transport and Communications budget. Accessed at: <https://valtioneuvosto.fi/en/-/1410829/government-proposes-eur-3.6-billion-for-ministry-of-transport-and-communications-budget>

<sup>92</sup> Rolander, N. (2024), Sweden Announces Increased Health Care Funding in 2025 Budget. Bloomberg. Accessed at: <https://www.bloomberg.com/news/articles/2024-09-06/sweden-announces-increased-health-care-funding-in-2025-budget>

TABLE 4: NORDIC DATA SOURCES

| Variable                             | Countries                    | Sectors                     | Source                                                   |
|--------------------------------------|------------------------------|-----------------------------|----------------------------------------------------------|
| GDP                                  | Denmark, Finland, and Sweden | All                         | Eurostat 2024: GDP                                       |
| Litigation costs                     | Denmark, Finland, and Sweden | All                         | World Bank: Doing Business in Europe 2020                |
| Market value of innovative companies | Denmark, Finland, and Sweden | All<br>High impact sectors. | EU JRC: The 2024 EU Industrial R&D Investment Scoreboard |

## ANNEX 5: 54 TOP NORDIC R&D INVESTORS

### Methodology:

The classification of companies into separate industry sectors was based on a structured approach. We began by identifying the top companies based in Denmark, Finland, and Sweden featured in the 2024 EU Industrial R&D Investment Scoreboard, which ranks the top 2,500 R&D-investing companies globally. The JRC already includes a categorisation by country and sector. Using this existing categorisation, we filtered for companies headquartered in Denmark, Finland, and Sweden, and identified the 54 companies. After this we gathered their corresponding industry classifications and headquarters information as provided in the dataset by the European Commission.

**TABLE 1: HIGHEST R&D INVESTING COMPANIES IN DENMARK, FINLAND, AND SWEDEN**

| Company               | Country | Sector                | Market capitalisation (€ billion) |
|-----------------------|---------|-----------------------|-----------------------------------|
| Alfa Laval            | Sweden  | Manufacturing         | 15.0                              |
| Alk Abello            | Denmark | Life sciences         | 2.8                               |
| Arla Foods            | Denmark | Food and beverages    | n.a.                              |
| Ascendis Pharma       | Denmark | Life sciences         | 6.5                               |
| Assa Abloy            | Sweden  | Manufacturing         | 27.6                              |
| Atlas Copco           | Sweden  | Manufacturing         | 52.5                              |
| Bavarian Nordic       | Denmark | Life sciences         | 1.9                               |
| Boliden               | Sweden  | Mining                | 7.8                               |
| Cargotec              | Finland | Manufacturing         | 2.9                               |
| Carl Bennet           | Sweden  | Life sciences         | n.a.                              |
| Coloplast             | Denmark | Life sciences         | 21.1                              |
| Danfoss               | Denmark | Manufacturing         | n.a.                              |
| Danske Bank           | Denmark | Finance               | 20.9                              |
| Dong Energy           | Denmark | Oil, gas, electricity | 21.1                              |
| Electrolux            | Sweden  | Manufacturing         | 2.7                               |
| Elekta                | Sweden  | Life sciences         | 2.8                               |
| Epiroc                | Sweden  | Manufacturing         | 15.0                              |
| Ericsson              | Sweden  | ICT                   | 17.5                              |
| Geely Sweden Holdings | Sweden  | Manufacturing         | n.a.                              |
| Genmab                | Denmark | Life sciences         | 19.1                              |
| GN Store Nord         | Denmark | Manufacturing         | 3.5                               |
| Grundfos              | Denmark | Manufacturing         | n.a.                              |
| H Lundbeck            | Denmark | Life sciences         | 3.5                               |

| Company                  | Country | Sector                | Market capitalisation (€ billion) |
|--------------------------|---------|-----------------------|-----------------------------------|
| Hexagon                  | Sweden  | Manufacturing         | 28.3                              |
| Husqvarna                | Sweden  | Manufacturing         | 3.5                               |
| IO Biotech               | Denmark | Life sciences         | n.a.                              |
| Kone                     | Finland | Manufacturing         | 20.5                              |
| Lego                     | Denmark | Manufacturing         | n.a.                              |
| Leo Pharma               | Denmark | Life sciences         | n.a.                              |
| LKAB                     | Sweden  | Mining                | n.a.                              |
| Neste                    | Finland | Oil, gas, electricity | 24.8                              |
| Nibe Industrier          | Sweden  | Manufacturing         | 11.4                              |
| Nokia                    | Finland | ICT                   | 17.4                              |
| Novo Nordisk             | Denmark | Life sciences         | 321.8                             |
| Novozymes                | Denmark | Life sciences         | 11.3                              |
| Orion Oyj                | Finland | Life sciences         | 4.2                               |
| Rockwool                 | Denmark | Manufacturing         | 2.9                               |
| Saab                     | Sweden  | Manufacturing         | 7.3                               |
| Sandvik                  | Sweden  | Manufacturing         | 24.7                              |
| Sitecore Holding II      | Denmark | ICT                   | n.a.                              |
| SKF                      | Sweden  | Manufacturing         | 7.7                               |
| Stora Enso               | Finland | Manufacturing         | 7.7                               |
| Svenska Handelsbanken    | Sweden  | Finance               | 19.2                              |
| Swedish Orphan Biovitrum | Sweden  | Life sciences         | 8.5                               |
| T&W Medical              | Denmark | Life sciences         | n.a.                              |
| Telia                    | Sweden  | ICT                   | 9.1                               |
| Tietoenvy                | Finland | ICT                   | 2.6                               |
| Valmet                   | Finland | Manufacturing         | 4.8                               |
| Vattenfall               | Sweden  | Oil, gas, electricity | n.a.                              |
| Vestas Wind Systems      | Denmark | Manufacturing         | 29.0                              |
| Volvo                    | Sweden  | Manufacturing         | 37.5                              |
| Wartsila                 | Finland | Manufacturing         | 7.8                               |
| William Demant Invest    | Denmark | Finance               | n.a.                              |
| Zealand Pharma           | Denmark | Life sciences         | 2.9                               |

Source: 2024 EU Industrial R&amp;D Investment Scoreboard