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Public Reinsurance in Multilevel Polities

EUROPE RE

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A decade of turmoil has transformed the European Union (EU). In the 'polycrisis', the European polity repeatedly reached breaking point. Equally regularly, however, the EU found ways out of its predicament, future-proofing its institutions and protecting its member states. While a broad literature explicates these crisis reactions, the general direction in which they have driven the EU is not yet understood. Which kind of EU has emerged from the polycrisis? Answering this question is crucial to grasping the purpose and evolution of international authority in an era of transboundary risks and crisis. EUROPE RE provides a novel response, suggesting the EU has become a provider of 'public reinsurance' to its member states.

To craft a reinsurance analysis of European institutional development, EUROPE RE draws on legal and economic analyses of private reinsurance and applies them to the public realm. Private reinsurance increases and diversifies the risk pool of insurers while remaining invisible to individual policyholders. In the public sector, the territorial state acts as citizens' primary insurer. Its insurance capacity, however, is called into question by mounting transboundary risks. To support states in resulting crises, the EU has created a series of standing capacities (e.g. ESM, SURE, Frontex, RescEU). This reinsurance allows the member states to maintain their primary responsibility for insuring citizens, to which the EU retains a merely indirect link.

EUROPE RE proposes a new framework to understand the contemporary 'nature of the beast' that is the EU. The project applies state-of-the-art methods to collect survey, panel, and case data on the emergence, effectiveness, and effects of public risk management in the EU and other multilevel systems. This allows EUROPE RE to provide a novel understanding of the purpose of European integration after the polycrisis, and a fresh perspective on its potential future trajectories.

Section a: Objectives and state-of-the-art

Synopsis and objectives

In the past crisis decade, *the European nation state proved at once indispensable and overburdened*. On the one hand, the nation witnessed a political resurgence as the central provider of solidarity and security. Nativist, Eurosceptic movements sprung up all over the continent; citizens grew wary of economic and societal opening; the UK chose to leave the EU. On the other hand, the state suffered a visible decline in problem-solving capacity, repeatedly exhausting its capacities in the face of 'transboundary crises' (Christensen, Lægreid, and Rykkja 2016). The financial crisis pushed various European states toward insolvency; the migration crisis overburdened 'frontline' and destination states; the Covid pandemic had states run out of intensive care units or money or both. Whether by fiscal, administrative, or technical support, the nation states of Europe recurrently required an outside stabiliser to throw them a lifeline.

Strikingly, *in all these crises, it was the ever-unstable EU that came to the nation-state's rescue* by creating novel or activating standing support capacities (cf. Table 1). Pertinent examples are the European Stability Mechanism (i.e. its 800 billion Euro bailout fund), the European Border and Coast Guard (i.e. its 10,000 corps of border guards), the RescEU stockpiling scheme (of medical goods, firefighting planes, etc.), and 'NextGenEU' (i.e. its 750 billion Euro Covid recovery package). Equally strikingly, while a broad literature explains these crisis reactions (Bickerton, Hodson, and Puetter 2015a; Börzel and Risse 2017; Genschel and Jachtenfuchs 2016; Hutter, Grande, and Kriesi 2016; Jones, Kelemen, and Meunier 2016; Smeets and Beach 2022), the direction in which they have driven the EU polity is not yet understood. *Which kind of EU has emerged from the 'polycrisis'? Answering this question is crucial to understanding the purpose of political authority beyond the nation state in an era of global risk and transboundary crisis.* EUROPE RE gives a new response in suggesting that the EU has stabilised its member states by becoming their provider of 'public reinsurance', and analyses the political, institutional, and normative effects of this development.

EUROPE RE takes inspiration from sociological theories of *'risk society'* (Beck 1992, 2007) and the economic and legal literature on private *risk management*. Private reinsurance is the 'insurer's insurance" (Pearson 1995: 558) and, by allowing an insurer to cede (part of) a risk to a reinsurer, increases the size and extension of its risk pool and maximizes its profits (Borch 1960, 1961, 1992). Importantly, reinsurance works indirectly and remains invisible to the individual policyholder. What the literature on private insurance and reinsurance lacks, however, is an application to the public realm. This is despite the fact that the state has increasingly assumed the function of an insurer of citizens against individual, societal, and more recently transboundary (Beck 1992; Dworkin 2002; Ewald 1991) risks. A pioneering contribution on risk-sharing in the Euro area (Schelkle 2017) mobilises theories of insurance. But it eyes one domain only, i.e. monetary union, and focuses on direct insurance rather than indirect reinsurance. EUROPE RE, by contrast, analyses the general institutional evolution of the EU and shifts the perspective to the EU as a reinsurer.

EUROPE RE develops a novel reinsurance analysis of EU integration. It explains how and why the EU repeatedly converged politically on institutionalising public reinsurance, assesses the latter's functionality, and explores its normative implications. It tests and refines its theory on a variety of new data and in a mixed-methods design combining surveys, panels, and case studies. *The project thereby aims to provide social scientists and practitioners with a better understanding of the contemporary dynamics and purposes of European integration – both as a diagnosis of current change and as a yardstick for future initiatives.* This overall goal breaks down into **five specific objectives** corresponding to the five work packages (WPs):

1. *To develop a reinsurance theory of European institutional development* (WP 1): Moving beyond characterizations of the EU as a 'regulatory polity' (Majone 1996) even in 'core state powers' (Genschel and Jachtenfuchs 2014, 2016), the theory explains why EU actors repeatedly preferred reinsurance over available alternatives and the design of different reinsurance arrangements.
2. *To map and analyse the supply of public reinsurance* (WP 2): To examine the EU supply of reinsurance, EUROPE RE compiles a novel dataset (*riskEU)* on the size and type of EU resources to deal with risks, and conducts qualitative case studies of the politics of reinsurance across risk types.
3. *To examine the demand for public reinsurance* (WP 3): To analyse the type of multi-level risk management citizens and parties prefer, EUROPE RE combines conjoint experiments in seven member states with natural language-processing (NLP) methods to scale party preferences from speech data.
4. *To compare the EU's recourse to reinsurance* (WP 4): EUROPE RE assesses the peculiarity and the functionality of EU reinsurance by means of a systematic comparison with public risk management in other multilevel polities (CA, CH, US) in the domain of natural disaster management.
5. *To understand the normative implications of the reinsurance model* (WP 5): Finally, EUROPE RE investigates whether and how the reinsurance polity resonates with the objectives and purposes of a 'demoi-cratic' EU and might thus constitute a potential *finalité* of the European project.

Contribution to the state-of-the-art

In applying theories of risk management to the institutional development of the European Union, *EUROPE RE provides a novel perspective on 'the nature of the beast'* (Risse-Kappen 1996) that is the EU.

Box 1: EUROPE RE central innovations
- Develops the concept of 'public reinsurance' as an innovative form of managing global 'hyper-risks'
- Provides a novel interpretation of the institutional development of the EU in the polycrisis
- Combines state-of-the-art methods to operationalize, measure, and explain the rise of and variation in public institutions of risk management, both within the EU and across multilevel polities
- Offers an analysis of the purpose of international authority in an era of transboundary crisis

After the Treaty of Maastricht (1993), the EU was famously characterized as a 'regulatory state' (Caporaso 1996; Majone 1996) whose focus was to reap the economies of scale of a continental market by issuing statutory rules constraining the behaviour of private actors. The core functions of the territorial or 'positive state' (Majone 1996), by contrast, i.e. resource extraction, redistribution, and coercion, remained near-fully in the hands of national governments (Leibfried and Zürn 2005). This division of labour was both a function and a cause of the small fiscal, administrative, and coercive resource base of EU institutions. Where the EU ventured into these '*core state powers*' (Genschel and Jachtenfuchs 2014) nonetheless, usually due to the negative externalities arising from previous integration in adjacent fields of market integration, it remained wedded to the toolbox of the regulatory state. Although the integration of core state powers differs substantively from the market in that it requires the allocation of scarce state capacities in a zero-sum fashion (Freudlsperger 2021a; Genschel and Jachtenfuchs 2018), the EU integrated them by *issuing rules rather than building capacity* (Genschel and Jachtenfuchs 2016). Instead of acquiring independent taxing powers, it circumscribed member states' taxation. Instead of forging an army, it sought to increase national forces' inter-operability. Instead of establishing an EU border guard, it coordinated the actions of national authorities. Instead of mobilizing a sizable budget, it constrained member states' expenditures. Even in core state domains, the European regulatory state thus persisted (Genschel and Jachtenfuchs 2014, 2016).

The 'polycrisis' (Juncker 2016; Zeitlin, Nicoli, and Laffan 2019) *upended this regulatory equilibrium.* In response to the string of crises engulfing the continent, the *capacities of individual states proved repeatedly insufficient*. In the financial crisis, some states lacked the means to bail out banks deemed 'too big to fail', and resolving cross-border banks such as 'Dexia' or 'Fortis' proved an intractable problem. The resulting fiscal overstretch fuelled the crisis of the common currency. In the migration crisis, 'frontline' states lost control over their borders while destination countries exhausted their absorption capacity. In the pandemic, various states lacked much-needed fiscal legroom, while public health systems across Europe reached breaking point. The Ukraine war again brought to the fore immense divergences in dependency and capacity. A sizable literature has sought to explain the *politics* of the EU's crisis responses: the emergence of a 'constraining dissensus' in mass publics (Hooghe and Marks 2008; De Vries 2018) and the resulting agreement on haphazard solutions (Jones et al. 2016, 2021); the centrality of governments (Bickerton, Hodson, and Puetter 2015a, b) but persisting influence of supranational actors (Smeets and Beach 2022; Smeets, Jaschke, and Beach 2019). *What the literature is less occupied with is the EU's general development as a polity*: *Which kind of EU has emerged from the polycrisis? EUROPE RE seeks to correct this omission.* Given the various instances of capacity building that have occurred (cf. Table 1), it is evident that the EU has moved beyond the regulatory polity. At the same time, it has not morphed into a positive state. The post-crisis EU represents a third type of polity that seems irreducible to its regulatory or positive nature. EUROPE RE thus suggests a novel conceptualization of the EU as a '*reinsurance polity*'.

Polycrisis	Novel EU-level support capacities
Financial and Euro crisis	• European Stability Mechanism (ESM) • Outright Monetary Transaction programme (OMT) • European Deposit Insurance Scheme (EDIS, to be concluded)
Migration crisis	• European Border and Coast Guard (Frontex) standing corps • European Agency for Asylum (EUAA) operational assistance and hotspots
Covid-19 pandemic	• Support to mitigate Unemployment Risks in an Emergency (SURE) • Recovery and Resilience Facility (RRF) • rescEU stockpile of medical equipment • European Health Emergency preparedness and Response Authority (HERA)

Table 1: Elements of public reinsurance created in reaction to the polycrisis

EUROPE RE postulates *that the root cause of the EU's transformation lies less in the polycrisis itself, which rather acted as its catalyst. Instead, it can be found in the spreading of transnational risks,* which strain and overburden nation state capacities. The project defines risk as 'the possibility of future occurrences and developments' (Beck 2007: 9) which must be distinguished from mere speculative possibility as well as the actual occurrence of a catastrophe (ibid.). It is constitutive of 'reflexive modernity' (Beck 1992) that the foremost 'successes of civilization' (Beck 2007: 4) have taken a self-undermining turn, creating risks as their by-product. Industrialization, for instance, increased the abundance of Western (and later non-Western) societies but caused the contemporary climate crisis. Financialization supported the efficient allocation of capital in the economy but also exacerbated the risk of systemic breakdowns. Transnationalization created opportunities for exchange and mutual enrichment but also brought with it the risk of fast-spreading pandemics. While risk always existed, contemporary risks are global in origin, next to impossible to predict, and hard to delimit in time and space (Beck 2013; Sørensen 2018). Helbing (2013) distinguishes five such 'hyper-risks': economic (e.g. energy price volatilities), geopolitical (e.g. military conflict), environmental (e.g. climate change), societal (e.g. infectious diseases), and technological (critical infrastructure breakdown). Importantly, in today's 'hyper-connected world' (Helbing 2013: 51), risks are interconnected, constituting nexuses in which they affect and reinforce one another (e.g. in the 'water-food-energy nexus').

The spreading of transboundary risks and crises has undermined the effectiveness of established systems of private and public risk management. Insurance was used as a private means of risk management already millennia ago. Its emergence as one of the major branches of the capitalist economy, however, was primarily linked to a string of disasters such as the Great Fire of London (1666; Harold 2014). When private insurance covered ever larger and more complex risks, specialised reinsurers offered protection against catastrophic losses. Reinsurance thus allowed primary insurers to reduce their risk by increasing the size and extension of the risk pool, and to maximize their profits through specialization. From the outset, reinsurers such as Munich or Swiss Re relied on larger risk pools, providing their services on a near-global scale (Bähr and Kopper 2016; Eden and Kahane 1990). *Due to the profitability constraint of private risk managers, however, public insurance proved crucial for risks that remained otherwise uninsurable and for individuals that remained otherwise uninsured* (Beck 2007; Ericson, Doyle, and Barry 2003). According to Ewald (1991: 288), 'insurance constitutes the very core of modern society', and already the emergence of the territorial state can be interpreted from an insurance perspective (Dworkin 2002; Moss 2002). The prime example of public insurance remains the modern welfare state which protects citizens from unemployment, old age, or care dependency (Beramendi et al. 2016; Esping-Andersen 1990; Ferrera 2006). *Both these private and public forms of risk management have been challenged by the rise of novel risks.* Global hyper-risks overburden private risk managers due to the incalculability of costs paired with their obligation to run a profitable business (Ericson and Doyle 2003; Ewald 1993), and they transcend the institutional limits of the territorial nation state. Consequently, *modern 'risk society' hits the limits of both private and public insurability* (Beck 2007, 2013). Resulting *'transboundary crises'* (Boin, Busuioc, and Groenleer 2014; Christensen et al. 2016) *have highlighted the absence of transnational providers of assistance to territorial states*. EUROPE RE proposes to conceptualize this assistance as 'public reinsurance'. The polycrisis, and the repeated necessity for the EU to step in and furnish states with additional resources, provides a case in point.

EUROPE RE analyses the EU as a potential provider of public reinsurance. In this transnational system of public risk management, states would retain their role as citizens' primary and sole direct insurers. The Union, in turn, would provide indirect reinsurance to them rather than direct insurance to citizens. As with reinsurance in the private sector, public reinsurance by the EU would thus remain *largely invisible to the 'policyholders'*. It would also take effect *solely in cases where transboundary crises threaten to overburden either individual states or groups of states*. In making this argument, EUROPE RE moves considerably beyond a literature that has applied risk-sharing theories to the workings of the *Euro area*. First, in the wake of the Euro crisis, a string of policy papers conceptualized an insurance-based stabilisation function for the common currency, usually as a 'European unemployment benefit scheme' and, later on, as an unemployment *reinsurance* (Beblavý et al. 2015; Benassy-Quere et al. 2018; Gros 2019; Luigjes and Vandenbroucke 2020; for an overview cf. Afscharian 2022). Second, Schelkle's (2017) theory of 'monetary solidarity' adopts a risk-sharing perspective in arguing that the economic gains from monetary integration increase with the size and diversity of the insurance pool, all while their political realization becomes more difficult. Some further contributions have explored the normative implications of insurance in the Euro area (Sangiovanni 2022; Vandenbroucke 2017). EUROPE RE transcends this literature by providing *an analysis of the general institutional development of the EU*; by shifting the *primary analytical focus to reinsurance rather than insurance*; by grounding its analysis in *sociological theories of global risk and risk society*; by measuring and explaining the *variance in the EU's provision of reinsurance across different types of risk*; and by systematically *comparing public risk management in the EU to other multilevel polities*.

Section b: Methodology

WP1. Developing a reinsurance theory of European institutional development (PI with team support)

WP1 elaborates a theory of public reinsurance against transboundary risks. The WP builds and expands on the conceptual work that entered into the creation of this proposal.

To prepare the theoretical ground, *WP1 first needs to define the core concept of 'public reinsurance'*. In doing so, it relies on the legal and economic literature on reinsurance in the *private realm*. In private risk management, reinsurance is usually defined as the "insurer's insurance" (Pearson 1995: 558). Whenever an insurer accepts a risk from a policyholder it deems too large to underwrite exclusively, it can seek protection against arising damages, and ensuing excess losses, by taking out reinsurance (Garven and Lamm-Tennant 2003). Under reinsurance, the primary or direct insurer cedes a risk to a secondary or indirect reinsurer (Deelstra and Plantin 2018). Importantly, the reinsurer remains invisible to the individual policyholder to whom the cedant is fully and exclusively responsible. Reinsurance has thus been described as "the most 'invisible' form of insurance" (Pearson 1995: 558).

By analogy with private reinsurance, EUROPE RE thus **defines 'public reinsurance'** as follows:

> *the indirect provision of public management of transboundary [economic, geopolitical, environmental, societal, or technological] risks, by means of [fiscal, administrative, technical, or coercive] capacity support provided by a [higher-level] public entity [i.e. the reinsurer] to another [lower-level] public entity [i.e. the insurer] without a visible and direct link to individual policyholders [i.e. the citizens].*

Public *re*insurance is distinct from public *in*surance by its indirect link to the individual policyholder to whom the primary insurer remains exclusively responsible and accountable. *Public* reinsurance is distinct from *private* reinsurance as its coverage is universal (i.e. comprising the entire citizenry) and mandatory (i.e. covering anyone subjected to a risk; Ericson and Doyle 2003; Ericson, Doyle, and Barry 2003).

➢ ***Step 1:*** *The choice of a type of public risk management*

The theory of public reinsurance to be tested by EUROPE RE *proceeds in two analytical steps*. The first step pertains to the political *choice of reinsurance* over alternative arrangements of public risk management. The second step deals with the choice of a specific *design of reinsurance*.

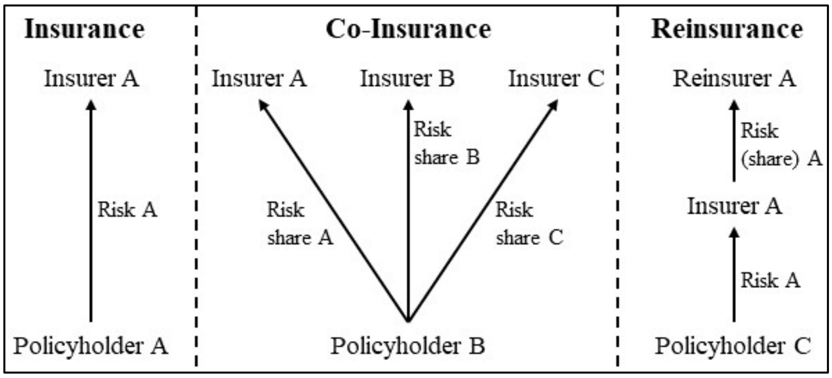

Figure 1: Types of possible risk-sharing arrangements

In a first analytical step, the theory deals with the political choice for reinsurance over its possible alternatives. In eyeing this aspect, the project adopts a *variation-centred perspective* that is particularly interested in the cross-sectoral differences between public arrangements for risk management: *Why do multilevel polities* (Benz 2016; Benz and Broschek 2013; Hooghe and Marks 2003)*, here: the EU, institutionalise schemes of public reinsurance in some domains all while relying on alternative means of public risk management in others?*

Generally, reinsurance needs to be distinguished from *two other types of public risk management* (cf. Figure 1; building on Pearson 1995) in multilevel systems.

1. *Insurance*: Insurance establishes a *direct relationship between the policyholder and an insurer* that absorbs the entirety of the insured risk. In multilevel systems, public insurance can be provided by either the federal or the sub-federal level. In the EU, by contrast, insurance is usually located at the national level. The welfare state is the most pertinent example, with the member states monopolizing

resource extraction and allocation, and the EU providing mere flanking regulation to alleviate interface conflicts between different national systems (Beramendi et al. 2016; Ferrera 2006).

2. *Co-insurance*: Co-insurance is a special form of direct insurance whereby *a policyholder spreads out portions of a risk over multiple direct insurers*. Co-insurance is often practiced in systems of fiscal federalism, where both the federal and regional levels provide complimentary insurance directly to citizens (Oates 2008; Rodden 2004, 2006). One example is the Medicaid programme in the United States, which provides health insurance coverage to low-income families and individuals and is jointly funded by the federal government and the states.

To understand the choice of a specific type of public risk management, *the theory uses a stylized demand-supply model*. Supply responds to demand factors both exogenous and endogenous to a multilevel political system: *Exogenous* drivers of public risk management consist in the emergence of *global risks* and their materialization in the form of *transboundary crises*. *Endogenous* factors that affect the demand of different types of risk management comprise the pre-existing level and effectiveness of state *capacities*, the *politicisation* of transnational risk-sharing in mass publics, and elite *preferences*. Whether a *demand for transnational risk-sharing* ultimately materialises is subject to *EU-level bargaining*.

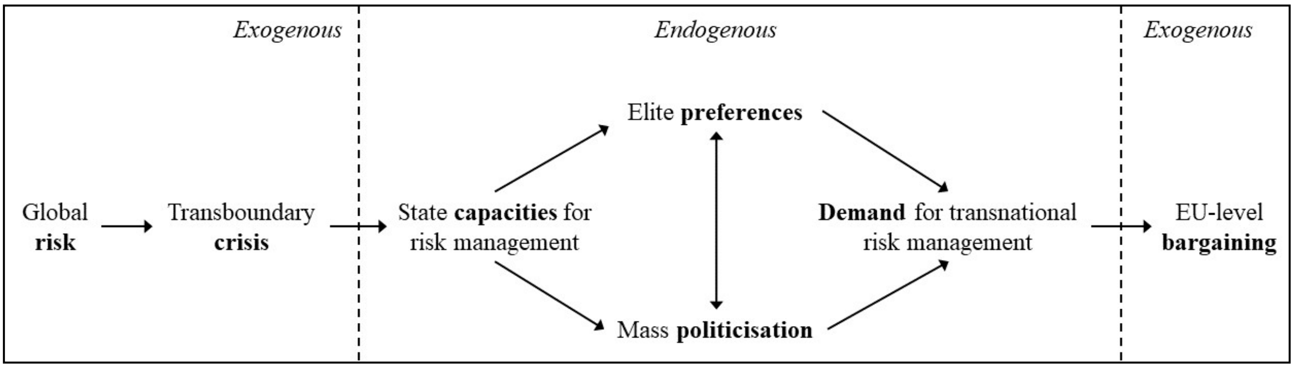

Figure 2: The political choice of transnational risk management

In the following, individual elements of the causal chain are specified in more detail:

- *Risk and crisis:* The project distinguishes five *types of global risks* (Franco et al. 2022; Helbing 2013), i.e. economic, geopolitical, environmental, societal, and technological. Importantly, risks form nexuses. Economic disparity (societal risk), for instance, is linked to global economic imbalances and asset price collapses (economic risk), chronic diseases (societal risk), climate change (environmental risk), or fragile states (geopolitical risk; Helbing 2013). It is particularly in these risk nexuses that systemic breakdowns produce *'transboundary crises'* (Boin 2019; Christensen et al. 2016) which challenge existing systems of risk management. Contemporary examples include financial crises, pandemics, large-scale migration movements, and the climate crisis.
- *Capacity:* Public risk management necessitates state capacity to mitigate, manage, and counteract transboundary crisis. In line with a Weberian understanding of the territorial state (Weber 1978), the literature on political development distinguishes four *types of state capacity* central for its emergence and maintenance (Evans, Rueschemeyer, and Skocpol 1985; Fortin-Rittberger 2014; Hanson and Sigman 2021; Levi 1988; Mann 1984; Skowronek 1982): fiscal (i.e. money), administrative (i.e. people), coercive (i.e. force), and technical (i.e. infrastructure). Arguably, depending on the type of transboundary crisis at hand, its management requires differing combinations of these state capacities. In situations, however, in which the capacities of a state are dysfunctional by and/or insufficient to manage a transboundary crisis, due to the latter's sheer magnitude and/or boundary-crossing nature (Beck 2007), a demand for transnational risk management might arise.
- *Politicisation:* On the level of actors, decision-making in transnational settings has been shown to be responsive to politicisation in mass publics (Hooghe and Marks 2019; Moravcsik 2018; Schimmelfennig 2015; de Wilde, Leupold, and Schmidtke 2016). According to this literature, a 'constraining dissensus' (in contrast to a 'permissive consensus') occurs when an EU policy that enjoys elite support is opposed by citizens and challenged by domestic parties (Hooghe and Marks 2008). *Citizens and parties* are sensitive to identity and distributive costs (Kuhn and Stoeckel 2014; Nicoli, Kuhn, and Burgoon 2020). Co-insurance, as a continuous and direct form of risk-sharing, is fraught with higher such costs than reinsurance, which is punctuated and indirect. At the same time,

citizens' support for transnational risk management is likely to differ between national publics, depending on the expected national calculus, i.e. whether a given member state stands to gain or lose, and the type of crisis at hand, especially whether it is seen as self-inflicted or as *force majeure* (Beetsma et al. 2021; Bremer, Genschel, and Jachtenfuchs 2020; Kuhn and Nicoli 2019).

- *Preferences:* In contrast to citizens and parties, *political and state elites* tend to be functional problem-solvers (Freudlsperger and Jachtenfuchs 2021). When national capacities prove insufficient or become dysfunctional, as was the case for some member states in the financial, refugee, and Covid crises, elites support supranational risk-sharing while seeking to minimise its material and sovereignty costs (Genschel and Jachtenfuchs 2016). Co-insurance is costlier than reinsurance, which usually limits risk-sharing to crises and avoids continuous pay-outs. Elite preferences for public risk management ultimately depend on the level of domestic state capacities. Elites that command sufficient capacity will support national insurance and, if threatened with EU-level systemic breakdown, reinsurance; elites whose capacities are overwhelmed will seek co-insurance.

In subsequent *EU-level bargaining*, the interests of elites and citizens need to be reconciled. In cases in which they align ('permissive consensus') in their support for transnational risk management, co-insurance is the likely outcome. When elites are broadly supportive of transnational risk management, either because of a lack of national capacities or out of fear of a systemic breakdown, all while citizens and parties remain sceptical ('constraining dissensus'), reinsurance provides a less visible, costly, and intrusive option. If the bulk of state elites deem existing domestic capacities sufficient, national insurance is the preferred option. This leaves us with three hypotheses on the choice of public risk management in the EU multilevel system:

Box 2: Hypotheses on the choice of type of public risk management

- **H1.1:** When state capacity is insufficient while state elites and citizens agree on the necessity of transnational risk-sharing, *co-insurance* is likely to be chosen.
- **H1.2:** When state capacity is insufficient while state elites and citizens disagree on the necessity of transnational risk-sharing, *reinsurance* is likely to be chosen.
- **H1.3:** When state capacity is sufficient, *national insurance* is likely to be maintained.

➢ ***Step 2:*** *The choice of a specific design of reinsurance*

The second step of the theory concerns the choice of a specific institutional design of public reinsurance. *Under which conditions and why do actors prefer specific institutional designs of public reinsurance?*

The theory adapts economic and actuarial insights on the workings of private reinsurance to the public realm. Theories of reinsurance usually begin from the assumption of two fundamental risks that afflict a reinsurance contract due to the informational advantage a direct insurer holds over an indirect reinsurer (Doherty and Tinic 2016; McNeil, Frey, and Embrechts 2015). While *moral hazard* occurs if cedants begin to accept excessive risks (Doherty and Smetters 2005; Eden and Kahane 1990; Plantin 2006; Powers and Shubik 2001), *adverse selection* arises when cedants selectively pass on bad risks (Cutler and Zeckhauser 1999; Garven, Hilliard, and Grace 2014; Jean-Baptiste and Santomero 2000; Winton 1995). In response, different designs of reinsurance contracts were devised that each deal with these risks in their own way. In turn, each of these design choices affects a reinsurance contract's eventual stabilization potential, i.e. its ability to smoothen the loss functions of primary insurers (Outreville 2002).

The literature distinguishes reinsurance contracts on three distinct dimensions, namely their *bindingness* on both contractual parties, their *coverage* of an insurer's risk portfolio, and the *proportionality* of pay-outs:

1. *Bindingness:* In *facultative* reinsurance, an insurer can or cannot propose to have an arising claim indemnified by a reinsurer that can or cannot accept the claim in part or entirety. In *obligatory* reinsurance, an insurer must seek reinsurance for any claim falling under the reinsurance contract, while the reinsurer is equally obliged to accept the claim. *While facultative schemes thus provide a framework for reinsurance but fix the contractual details only once a claim occurs, obligatory reinsurance binds both parties ex ante* (Deelstra and Plantin 2018).

➢ Facultative reinsurance *minimises moral hazard* by leaving a residual risk of non-reinsurance when claims arise. This incentivises primary insurers to avoid risks and catastrophic losses in the first place. Conversely, it *reduces the stabilisation potential* of the reinsurance contract as primary insurers might remain un-reinsured under certain circumstances.

2. *Coverage:* Under *partial* reinsurance contracts, an insurer passes merely a sub-segment of the risks it accepted from individual policyholders on to the reinsurer. In *global* reinsurance, an insurer passes

the entirety of its portfolio of accepted risks on to the reinsurer. *While partial reinsurance schemes allow insurers to cede risks selectively to a reinsurer, global reinsurance covers a direct insurer's entire portfolio* (Jean-Baptiste and Santomero 2000).

➢ Global reinsurance *minimizes adverse selection* by avoiding the selective cession of risks on the part of primary insurers. By diversifying the risk pool to include both good and bad risks, global contracts thus *increase the effectiveness and the stabilisation potential* of reinsurance.

3. *Proportionality:* Under *proportional* reinsurance, the insurer and reinsurer share all risks in a prespecified ratio. Under *non-proportional* reinsurance, the reinsurer only accepts claims brought by the insurer that exceed a prespecified threshold level. Such 'excess-of-loss reinsurance' solely covers claims beyond a certain deductible that is to be covered by the direct insurer. *While proportional schemes cover a pre-fixed proportion of all claims, non-proportional or 'excess-of-loss reinsurance' kicks in only beyond a deductible* (William 2021).

➢ Non-proportional schemes *reduce moral hazard* by limiting reinsurance to disasters only. Avoiding the exponential follow-up costs arising from catastrophic events, non-proportional schemes also hold higher stabilisation potential (Beblavý et al. 2015). At the same time, as reinsurance only kicks in beyond a certain deductible, excess-of-loss reinsurance is no means to counteract systemic differences in ex-ante risk vulnerabilities between different primary insurers.

Based on these theoretical considerations, a combination of *obligatory, global, and non-proportional reinsurance* should hold the maximum stabilisation potential. Yet, what is rational from a risk-sharing perspective need not be politically expedient (Schelkle 2017). From the perspective of member states that hold sufficient capacity, prefer national insurance, and accept reinsurance solely to avoid systemic breakdown, a combination of *facultative, partial, and non-proportional reinsurance* is desirable as it minimizes both moral hazard and continued pay-outs, despite its lower stabilisation potential. Member states, on the other hand, that lack the necessary state capacity to manage transboundary crisis and settle for reinsurance as an alternative to their preferred option of federal co-insurance, will seek *obligatory, global, and proportional reinsurance* since it unlocks a higher stabilisation potential and counteracts systemic imbalances in national risk vulnerabilities with continued pay-outs.

Box 3: Hypotheses on the specific design of reinsurance

- **H2.1:** When state elites and citizens seek to minimize moral hazard and avoid continued pay-outs, they prefer facultative, partial, and non-proportional reinsurance.
- **H2.2:** When state elites and citizens seek to maximize stabilization and reduce systemic imbalances, they prefer obligatory, global, and proportional reinsurance.

WP2. Mapping and analysing the supply of public reinsurance (1 PhD researcher + 2 RAs)

<u>WP2 measures the supply of public risk management in the EU via the novel 'RiskEU' dataset.</u> RiskEU takes five global risks as its analytical point of departure, therefore allowing for a fine-grained measurement of the variation in EU public risk management across different risk types.

Conceptualization: To measure the supply of public risk management by the EU, EUROPE RE constructs the novel '*RiskEU' dataset*. RiskEU is the first dataset on the extent and evolution of EU risk management. Reinsurance requires either standing or novel capacities on part of the EU to support member states if need be. RiskEU thus collects annual data on four types of EU-level capacities to manage five types of risk. The basic unit of analysis is the *risk-capacity_type-year*. The observation period begins in 1993 (entry into force of the Maastricht treaty) and ends in 2028 (project end). The dataset contains every possible unit of analysis, even if no matching EU resource exists in a given year (coded as 99). If more than one EU resource exists that matches a given risk-capacity_type-year, each resource receives an individual entry. If one resource covers more than one risk (*risk nexuses*), it is entered more than once into the dataset per given year. Figure 3 provides an illustration of the dataset structure and of one unit of analysis (unit: *societal-coercive-2021*).

risk	sub_risk	year	capacity_type	capacity	capacity_bud	capacity_staff	membership	exec_control	risk_type	bindingness	coverage	proportionality
...	...	...	...	...	...	...		...	...	...	...	...
societal	migration	2021	coercive	Frontex	EUR 543 mio	1,500 staff	EU + CH, IS, LI, NO	joint	reinsurance	pot. obligatory	partial	excess-of-loss
...	...	...	...	...	...	...		...	...	...	...	...

Table 2: Basic structure of the 'RiskEU' dataset

Per resource, the *RiskEU dataset* comprises data on at least the following dimensions. A more detailed codebook is to be created in a first step of WP2.

- *risk*: RiskEU distinguishes *economic, environmental, geopolitical, societal,* and *technological* risks.
- *sub_risk*: RiskEU follows Helbing (2013: 52) in differentiating overall 38 sub-types of risk.
- *year*: RiskEU covers a period of observation of overall 36 years, from 1993 to 2028.
- *capacity_type*: RiskEU distinguishes between *administrative* (EU-employed administrative staff), *coercive* (EU-employed enforcement staff), *fiscal* (expenditures in the entire EU budgetary universe), and *technical* (EU-maintained technical infrastructures) resources on the EU-level.
- *capacity*: Codes the *name* of the specific EU resource. RiskEU covers only resources mandated by EU primary (e.g. ECB), secondary or tertiary law (e.g. agencies), or created outside the treaties but with an explicit linkage to EU institutions (e.g. ESM).
- *capacity_bud, capacity_staff*: RiskEU records the annual *budget* (in Euros) and the annual (technical and coercive) *staff* (in persons).
- *membership:* RiskEU codes whether an EU-level resource can be used by *all member states*, by *sub-groups* only (e.g. Euro area), or also by *associates* (e.g. Schengen).
- *exec_control*: RiskEU codes whether the usage of a given resource is controlled by *supranational* actors only, *intergovernmentally* among the member states, or *jointly* by national and supranational actors (Freudlsperger, Maricut-Akbik, and Migliorati 2022).
- *risk_type*: RiskEU codes whether EU resources interact *directly* with citizens (co-insurance), *indirectly* via member state bureaucracies (reinsurance), or *not at all* (national insurance).
- *bindingness*: RiskEU distinguishes *obligatory* (member states are bound), *potentially obligatory* (member states can be compelled), and *facultative* usage (member states request).
- *coverage*: RiskEU specifies whether it is mandated for cross-sectoral usage across a variety of risk types (*global*) or for specialised usage on one risk only (*partial*).
- *proportionality*: RiskEU codes whether it is mandated to support member states continually (*proportional*) or solely in pre-specified cases of urgency (*excess-of-loss*).

Data and measurement: The EU defines its resources for public risk management legally, by means of *primary* (treaties), *secondary* (regulations and directives) and *tertiary law* (implementing legislation), or in *intergovernmental treaties*. To check for the existence, competences, and governance of EU resources, it is thus necessary to screen the extensive body of EU legislation and ECJ case law. To additionally measure the budget and staff of EU-level resources, it is crucial to access EU budgetary legislation, annual reports of EU institutions and, where necessary, to file freedom of information requests. While legislation on the EU budget can be accessed via *EUR-Lex*, annual reports of EU agencies and other EU bodies are to be taken from their websites. The PI has gathered extensive experience in the manual coding of EU legal documents as WP lead on the ERC project EUROBORD (Demirci et al. 2023; Freudlsperger et al. 2023; Freudlsperger and Schimmelfennig 2022a). For the RiskEU dataset, the bulk of manual coding is to be conducted by a PhD researcher and two RAs. The analysis is to be prepared and assisted by the usage of machine-learning tools based on word embeddings (Braby, Guinaudeau, and Sältzer 2022; Rudkowsky et al. 2018) that facilitate the extraction of subsets of the acquis that deal with specific types of risk or risk management.

WP3. Examining the demand for public reinsurance (Postdoc + 2 RAs)

WP3 investigates the three demand-side factors behind the emergence of public risk management specified in WP1, i.e. the *capacities* of member states, the *preferences* of elites, and the *politicisation* among citizens.

1) State capacities: The amount of and differentials in capacities at the disposal of individual member states acts as the most important driver of EU risk management, be it in the form of transnational reinsurance or federal co-insurance. The less capacity a member state commands and the larger the differential is between the capacity of one member state compared to others, the more likely it is that elites and/or citizens demand EU-level risk management. State capacity is a multidimensional concept, and the extant literature offers a variety of measures that capture or proxy state capacity by different means. EUROPE RE will rely on the *Hanson-Sigman index* (HSI; Hanson 2018; Hanson and Sigman 2021), which has two main advantages over alternatives measures (cf. Vaccaro 2022): First, in contrast to other measures, HSI explicitly captures *three pertinent conceptual dimensions*: fiscal, administrative, coercive. Based on differing subsets of its 24 sub-indicators, HSI thus also allows for the construction of disaggregated measures of capacity per dimension. *EUROPE RE will construct such sub-scores* to better capture EU member states' capacity to deal with different risks. Second, HSI is openly available and calculated in a transparent procedure that can be *replicated by means of latent variable analysis* with the aid of specialised software such as the dedicated R package 'lavaan'. *EUROPE RE will extend the index*, which currently runs from 1960 to 2015, to cover the entire observation period until 2028. HSI uses a standardised scale with a mean of 0 and a standard deviation of 1. Figure 4 plots the general HSI scores of 25 EU member states (Luxembourg and Malta are excluded for lack of data). It shows that the difference in state capacity between the lowest-ranked (Cyprus, 0.93) and the highest-ranked (Denmark, 2.7) member is significant and spans nearly two standard deviations.

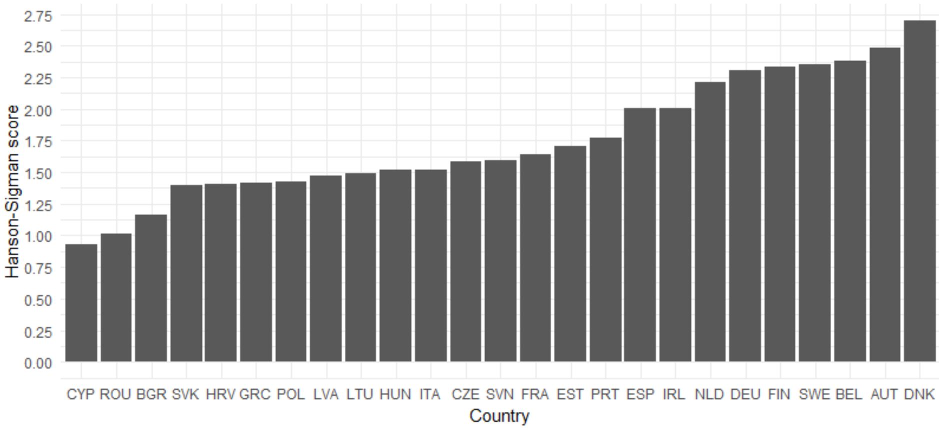

Figure 3: General HSI scores of 25 EU member states for 2015

2) Elite preferences: To test the conditions under which elites react to a lack of state capacity and support different types of risk-sharing, it is crucial to systematically measure their preferences. To this end, EUROPE RE will use innovative NLP methods on the *EUSpeech* (Schumacher et al. 2020) corpus of political leaders' speeches in 13 EU member states. *As part of the project, the EUSpeech corpus is to be updated, to contain speech data until 2027, and expanded, to include both the European Commission and the country case of Romania*, i.e., a Southern member state with a low HSI score. The most suitable and up-to-date method to identify party positions from a multilingual text corpus is *latent semantic scaling* (LSS; Brändle and Eisele 2022; Rauh 2022; Watanabe 2021). The PI has gained significant experience with both EUSpeech and LSS in the context of EUROBORD (Freudlsperger and Lipps 2023) and will hire a postdoc with expertise in NLP methods to lead WP3. LSS allows for a semi-automated placement of large bodies of text on unidimensional scales. Departing from a battery of theoretically derived 'seed words', LSS's machine-learning algorithm incorporates word embeddings of all terms correlated to either of the two poles. To measure elite preferences on public risk management, *EUROPE RE will construct and correlate two scales:* direct/indirect risk management (e.g. support for the Greek *government* or for Greek *citizens*) and national/transnational risk management (e.g. support from *national* governments or from *supranational* institutions). The choice of effective and unambiguous seed words for both scales requires extensive pre-testing and cross-validation by human coders, which will be among the tasks of the two RAs employed in WP3. Once validated, combining the scales allows for a placement of elites on the *three dimensions of insurance (direct/national), reinsurance (indirect/transnational), and co-insurance (direct/transnational)*.

3) Mass politicisation: Demand for public risk management is sensitive not solely to functional pressures but also to public opinion and politicisation in mass publics. To better understand citizens' support for, or opposition to, different types of public risk management, *EUROPE RE will field a conjoint survey experiment* (Hainmueller, Hangartner, and Yamamoto 2015; Hainmueller, Hopkins, and Yamamoto 2014). This also allows for testing the individual-level microfoundations of the political choice for public reinsurance. *The selection of six country cases for the conjoint is to reflect both the differentials in state capacity as identified by the HSI and Kriesi's (2016) definition of the three macro-regions of the EU*: Germany and Denmark (*North*), Poland and Romania (*East*), Italy and Greece (*South*). Calculations with the 'Power Analysis Tool' provided by Stefanelli and Lukac (2020, cf. Schuessler and Freitag 2020) show that a conjoint experiment with 8 forced-choice tasks and a maximum variable level of 5 (cf. Table 3) provides high statistical power from a level of 2,000 respondents per country. In an ongoing research project, the PI has gained significant experience in fielding and analysing a conjoint experiment in Germany and the United States (Fesenfeld, Freudlsperger, and Kuntze 2023). In addition, the postdoc hired to lead WP3 should be familiar with experimental designs. Conjoint experiments have the advantage of allowing for the variation of a theoretically indefinite number of factors and for the analysis of complex, multidimensional choices in one and the same survey (Knudsen and Johannesson 2019). The objective of the conjoint is to identify the conditions under which citizens choose different types and designs of risk-sharing. *To this end, the* *experiment varies at the maximum the following dimensions (reducing dimensions further could increase intelligibility), which need to be further operationalised and pre-tested before fielding the survey:*

Under which conditions should risks be shared?	**Features**
Risk	• Economic • Environmental • Geopolitical • Societal • Technological
Capacity type	• Administrative • Coercive • Fiscal • Technical
National calculus	• Net beneficiary • Net contributor
Provider	• National • EU • Both
Recipient	• Citizens • State institutions
Proportionality	• Crisis • No crisis
Bindingness	• Compulsory • Facultative
Coverage	• Various risks per instrument • One risk per instrument

Table 3: Dimensions of the conjoint experiment

WP4. Comparing the EU's recourse to reinsurance (1 PhD researcher + PI)

WP4 compares public risk management in the EU and three federations to understand the peculiarities and the effectiveness of the EU's approach, and to draw potential lessons for its future trajectory. In comparative case studies, WP4 analyses how and why multilevel polities create different systems of risk management.

Conceptualization: Comparisons of the EU to federal states have become widespread practice (Bednar 2008; Bolleyer 2009; Fabbrini 2007; Fossum and Jachtenfuchs 2017; Freudlsperger 2020). Rather than signifying a normative position on the nature of the EU (quite the contrary, cf. WP5), *comparisons with federations aid in overcoming the 'sui generis' bias of EU research* (Caporaso et al. 1997) *all while carving out the peculiarities of the EU's institutional development* (Fossum 2006). The default configuration of federal risk-sharing is co-insurance, which establishes a direct relationship between federal and sub-federal insurers and their policyholders, i.e., citizens. In line with EUROPE RE's theory of institutional choice, however, the type and design of public risk management in multilevel systems will vary with the size and effectiveness of the capacities of constituent units, the nature of elite preferences, and the degree of mass politicization. To understand why different multilevel systems opt for different types of risk-sharing, and whether the EU fits or contradicts the pattern found in federations, *WP4 foresees comparative case studies of the EU and three federations that differ in their institutional setup and historical trajectory: Canada, Switzerland, and the United States*. Canada and the US are examples of 'self-rule federations' where the constituent units and the federal level command independent spheres of influence. Switzerland is a 'shared rule federation' in which cooperation between the cantonal and the federal level is key (Benz and Broschek 2013; Dardanelli et al. 2019; Mueller and Fenna 2022). While the US is historically marked by a drive toward centralization, the opposite applies to Canada (Kincaid 2019; Lecours 2019). The Swiss federation, in turn, has remained comparatively decentralized due to the effect of popular referendums (Kriesi and Trechsel 2008). *The vast variation among the three cases will allow for an assessment of the effects of differing constellations of capacities, preferences, and politicization.* Through previous research (Freudlsperger 2018, 2020, 2021b, 2022), the PI is familiar with the political systems of the three federations.

Data and measurement: The qualitative comparative case studies focus on one specific domain, namely the *domestic multilevel management of natural disasters induced by climate change*, especially heatwaves, droughts, floodings, storms, and wildfires. The domain is chosen for two reasons. First, the mitigation of natural disasters requires a *wide array of public resources* (administrative, coercive, technical) that goes far beyond the mere provision of financial support. The multilevel management of natural disasters thus necessitates the *build-up and coordination of different types of public resources* across levels of authority. Second, the climate crisis has brought into sharp relief the *increasing scale, frequency, and importance* of natural disasters. While initially either a devolved or privatized domain in most multilevel systems (Kirkegaard 2018; Rivera and Miller 2006), climate change has made disaster mitigation increasingly burdensome (Brattberg and Rhinard 2013; Gerber 2007; November, Delaloye, and Penelas 2007), and potentially overburdening, for constituent units, which exerts a pressure to explore *novel types of public risk management in multilevel systems* (Hegele and Schnabel 2021; Schnabel, Freiburghaus, and Hegele 2022). WP4 will conduct qualitative comparative case studies of natural disaster management in the four multilevel systems in question. *All case studies investigate* the historical *origins*, the constitutional and institutional *context*, the *drivers* (capacities / elites / public opinion) the *type* (insurance/ reinsurance/ co-insurance), *design* (bindingness/ coverage/ proportionality), and over-time *trajectory* of disaster mitigation in the four multilevel systems. To support such a *comprehensive political and institutional account of multilevel disaster management*, the analysis will rely on a range of qualitative and quantitative evidence: secondary literature on specific disasters; archival and other material on the creation, size, and governance of public resources; existing research on public opinion; news coverage of and research interviews with elites.

WP5. Understanding the normative implications of the reinsurance model (PI + team support)

<u>WP5 devises a normative political theory of public reinsurance in the EU</u>, focusing particularly on the democratic legitimacy of different types of risk management.

The proper type and level(s) of democratic legitimation of EU authority has remained among the most vexed questions of European integration research. In the past crisis decade, the debate on the 'democratic deficit' of the EU (Follesdal and Hix 2006; Grimm 1995; Habermas 1995; Majone 2005; Scharpf 1999) was revived with renewed intensity (Grimm 2015; Kreuder-Sonnen 2019, 2021; White 2015). Against this backdrop, WP5 builds its normative theory on the assumption that different types of political authority, and thus also different types of public risk management, require different types and institutional bases of legitimacy:

- *Co-insurance:* As a federal type of public risk management, co-insurance would set the EU-level on par with member states, engaging in a continuous mobilization of public resources and direct provision of services to citizens. Accordingly, it would also require a federal-type legitimation of EU authority. In the concept of a *'pouvoir constituant mixte'* that is 'split at the root' of individual citizens, Habermas (2017; cf. Niesen 2017; Patberg 2017) has provided a rationale for such a federal equality of the EU and the member states. The institutional implications of the Habermasian understanding of the EU include, among others, a fully-fledged supranational parliamentarisation (Benz 2020, 2021) of public risk-sharing to safeguard its democratic legitimacy.
- *National insurance:* This type foresees a subordinate role for the EU in public risk management, confined primarily to the regulatory alleviation of interface conflicts between national systems. Accordingly, national insurance corresponds to an intergovernmental understanding of both transnational authority and legitimacy (Majone 1998, 2005; Moravcsik 2002). Intergovernmentalism conceives of member state governments as the central and primary channel to legitimize EU authority and envisioning a tightly constrained (if any) role for a supranational parliamentarisation.
- *Reinsurance*: As an indirect type of public risk-sharing (i.e. provided to states rather than citizens) primarily confined to crises (rather than on an ongoing basis), reinsurance eclipses an intergovernmental but falls short of a federal notion of EU risk management. As such, it is congruent with the pragmatic standards of legitimacy applied by the proponents of a 'demoi-cratic' union of sovereign statespeoples (Bellamy 2019; Cheneval, Lavenex, and Schimmelfennig 2015; Cheneval and Schimmelfennig 2013; Kröger and Bellamy 2016; Nicolaïdis 2004). Three elements make demoi-cratic thought particularly amenable to a normative theorising of reinsurance. First, in contrast to Habermas, demoi-crats understand the Union's legitimacy as based on nationally constituted demoi rather than one emerging European demos. Second, demoi-cratic notions of social justice are hence grounded in the equality of states rather than the equality of citizens. Third, the core value of a demoi-cratic union is the mutual non-domination among different statespeoples (Bellamy 2017; Kreuder-Sonnen 2019, 2021; White 2015). On the basis of these assumptions, a demoi-cratic theory of public risk management would formulate a pragmatic standard of legitimation which is primarily provided by national governments and is safeguarded in the event of transboundary crises by a form

of supranational parliamentarisation that is representative of interdependent but distinct statespeoples rather than one European demos.

Normative theorising as foreseen by WP5 can offer an understanding of the purpose and legitimacy of transnational authority in contemporary Europe. Particularly, it aids in assessing whether the reinsurance model is merely a politically expedient solution that the EU repeatedly gravitated to as a minimum compromise between sceptical publics and pragmatic elites, or whether its underlying logic resonates more deeply with the purposes of integration and thus constitutes a potential *finalité* of the European polity.

Team, timetable, and deliverables

The team includes the PI (100%), 1 postdoc (100%), 2 PhD researchers (100%), and 4 RAs (20% each). *All members contribute to the project's outputs, which foresees 10 journal articles, 1 monograph, and 1 journal special issue.* The postdoc will be hired for 3 years, the PhD researchers for 4 years each, and the RAs for 2 years each. The table below illustrates the team composition and expected deliverables per team member.

Person	WP	Year 1	Year 2	Year 3	Year 4	Year 5
PI	WP1-5	Hire team, conduct WP1 + write A1/A2, supervise WP2-4 + co-author A6*, assist WP4		Conduct WP5, supervise WP2-4, co-author A4*/A8*/A10*	Supervise WP2 & 4, write monograph	
PhD 1	WP2	Proposal & pilot	*RiskEU* dataset & analysis	A3/A4*		
Postdoc	WP3	Conjoint + A5/A6*, preparation of text corpuses		LSS + A7/A8*, organise special issue*		
PhD 2	WP4	PhD Proposal & pilot study	Fieldwork & empirical analysis	A9/A10*		
4 RAs	WP2-4	Data collection & coding				

A=article | WP=work package | *=Co-authored | LSS=latent semantic scaling | deliverables

Assessment of the risks involved in the project

EUROPE RE promises a novel understanding of the institutional development of the EU. Conversely, the project comes with significant, if overall manageable, risks. First, the *theory of public reinsurance might fail as a 'grand theory' of the EU's institutional development* if supranational reinsurance turns out to be negligible vis-à-vis other types of public risk management. Such a result would still provide important insights. As EUROPE RE theorises and measures the emergence and workings of three types of public risk management, the analysis can yield results even if the specific focus on reinsurance needs to be relaxed. Second, the concept of *public risk management might be excessively complex to lend itself to an instructive survey experiment* with citizens with limited pre-existing knowledge of and experience with EU governance. This risk needs to be mitigated by extensive pre-testing and, in case this proves unsuccessful, by either reducing the number of forced-choice tasks or by restricting the number of country cases and choosing a qualitative method that enables a more in-depth exploration of complex voter preferences, e.g. focus groups. Third, the LSS method for *scaling elite preferences from large bodies of text may not produce sufficiently high-quality output*, in spite of the recent advances in automated text analysis, cross-validation by two RAs, and the fact that EUROPE RE will collaborate with leading experts at ETH Zurich. Should this be the case, EUROPE RE will increase the share of manual coding in the data collection process. The PI would be able to rely on his expertise in hand-coding parliamentary debates (Freudlsperger and Weinrich 2021, 2023). Though the empirical scope of the analysis would have to be reduced, a thorough selection of countries and time periods should still generate valid results. Fourth, the systematic *collection of qualitative and quantitative data on the management of natural disasters in four multilevel polities might turn out too burdensome* to be shouldered by one PhD researcher. Should this be the case, the scope of the empirical analysis would have to be narrowed down, either by focussing on a single type of climate-induced disaster risk, or by restricting the analysis from four to two polities which exhibit the largest possible variation on the independent variables, such as the EU and the US.

Suitability of the PI and the host institution

The PI has conducted research on several fields relevant to EUROPE RE: European integration theory and core state powers (Freudlsperger 2021a; Freudlsperger and Jachtenfuchs 2021; Freudlsperger and Schimmelfennig 2022b, 2022a; Freudlsperger and Weinrich 2023), the creation of EU-level capacities (Akbik, Freudlsperger, and Migliorati 2023; Freudlsperger et al. 2022), and comparisons of the EU with federal systems (Freudlsperger 2018, 2020, 2021b, 2022). Methodologically, he specializes in quantitative text analysis (Freudlsperger and Lipps 2023; Freudlsperger and Weinrich 2021, 2023), conjoint survey experiments (Fesenfeld et al. 2023), and the collection of long-term institutional data (Demirci et al. 2023; Freudlsperger et al. 2023). To complement his solid understanding of conjoint experiments and NLP methods, the PI will hire a postdoc with expertise in these methods to direct WP3. The PI has also gained extensive experience in leading a team of researchers and in research administration in his previous position as Research Coordinator at the Jacques Delors Centre (JDC) and as work package leader in the ERC Advanced Grant 'EUROBORD'. As an affiliate with the JDC, the PI has also co-supervised (since 2020, together with Markus Jachtenfuchs and Sean Mueller) a doctoral researcher (Kinga Koranyi) analysing fiscal federalism in Canada, the EU, Switzerland, and the US.

The Department of Humanities, Social and Political Sciences (D-GESS) at ETH Zurich is an ideal host institution for EUROPE RE due to its excellent group of scholars working on global risks (Dirk Helbing), European integration (Frank Schimmelfennig, Natasha Wunsch, Matthias Leese), experimental research (Dominik Hangartner), NLP methods (Elliott Ash), and its close ties to the University of Zurich (Francis Cheneval, Jonathan Slapin, Stefanie Walter) via the Center for International Studies (CIS). At the same time, D-GESS would provide the PI with ample freedom and the necessary resources to set up an independent 'research group on public risk management'. In addition, ETH's RiskLab (https://risklab.ethz.ch/), located at D-MATH, is a major hub of economic and actuarial research on *private* risk management. A collaboration could also open interdisciplinary synergies in the modelling of *public* risks and reinsurance practices.

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