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Private Insurance, Public Welfare, and Financial Markets

Alpine and Maritime Countries in Comparative-Historical Perspective

Arjen van der Heide and Sebastian Kohl

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Abstract

Contemporary capitalist societies use different institutions to manage economic risks. While different public welfare state and financial institutions (banks, capital markets) have been studied across coordinated and liberal market economies, this paper adds the private insurance sector to the study of countries' security arrangements, following up on Michel Albert's classical distinction between Alpine and Maritime insurance cultures. Building on extensive new insurance data collections (1880–2017) and institutional analysis, this paper corroborates the long-run historical existence of two worlds of private insurance. Maritime countries (USA, GBR, CAN) developed much bigger life and non-life insurance earlier, with no state-associated insurance enterprises and riskier investments steered towards financial markets. Alpine insurance (AUT, DEU, CHE), by contrast, was initially smaller, with strong state involvement, a significant reinsurance tradition and relatively heavy investments in mortgages and property, due to economic and financial backwardness. We argue that the larger and more "Maritime" the insurance sector, the more it made welfare states liberal and securities markets large. Insurance is thus a hidden factor for countries' varieties of capitalism and world of welfare. The recent convergence on the Maritime model, however, implies that the riskier and risk-individualizing type of private insurance has added to privatization and securitization trends everywhere.

Keywords: financial development, historical comparison, insurance, varieties of capitalism, welfare

Zusammenfassung

Moderne kapitalistische Gesellschaften bedienen sich verschiedener Institutionen, um wirtschaftliche Risiken zu managen. Während wohlfahrtsstaatliche und Finanzinstitutionen (Banken, Kapitalmärkte) in koordinierten und liberalen Marktwirtschaften bereits hinreichend untersucht wurden, wird in diesem Beitrag der private Versicherungssektor in die Untersuchung der Sicherheitsarrangements der Länder einbezogen, aufbauend auf Michel Alberts klassischer Unterscheidung alpiner und maritimer Versicherungskulturen. Mit einer neuen Sammlung von Versicherungsdaten (1880–2017) und einer institutionellen Analyse bestätigt dieses Papier die langfristige historische Existenz zweier Welten privater Versicherung. Die maritimen Länder (USA, GBR, CAN) entwickelten früher viel größere und weniger staatsregulierte Lebens- und Schadensversicherungen mit risikoreicheren Investitionen, die auf die Finanzmärkte gelenkt wurden. Die alpine Versicherung (AUT, DEU, CHE) war dagegen anfangs kleiner, mit einer ausgeprägten staatlichen Beteiligung, einer bedeutenden Rückversicherungstradition und relativ hohen Investitionen in Hypotheken und Immobilien, was auf die wirtschaftliche und finanzielle Rückständigkeit zurückzuführen ist. Wir argumentieren, dass je größer und „maritimer" der Versicherungssektor war, desto mehr hat er die Wohlfahrtsstaaten liberalisiert und die Wertpapiermärkte vergrößert. Das Versicherungswesen ist somit ein versteckter Faktor für die verschiedenen Kapitalismusformen und Wohlfahrtssysteme der Länder. Die jüngste Konvergenz hin zum maritimen Modell bedeutet jedoch, dass die risikoreichere und risikoindividualisierende Art der privaten Versicherung überall zu Privatisierungs- und Verbriefungstendenzen beigetragen hat.

Schlagwörter: finanzielle Entwicklung, historischer Vergleich, Spielarten des Kapitalismus, Versicherungen, Wohlfahrtsstaat

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1 Introduction

Societies insure themselves against economic risks through different institutions. They offload risks onto collective welfare institutions, motivate private household savings or incentivize homeownership. Business risks in turn can be borne by banks or capital markets. Liberal market economies (LMEs) like the US have been known to rely less on collective welfare arrangements and more on private pension savings and homeownership for households as well as capital-market risk-bearing for businesses. This implies a security arrangement with more individual risk-bearing and more exposure to short-term volatilities. Coordinated market economies (CMEs) like Germany are known for more collective welfare arrangements, savings through cooperative or public institutions and less homeownership as well as bank-based business finance. This implies a security arrangement with more solidaristic risk-sharing and a long-term orientation.

Among the private/public, financial/non-financial institutions allowing societies to cope with economic uncertainty, comparative political economy (CPE) has strangely ignored the institution created outright to manage economic risks: the insurance industry, which, historically, even preceded modern banking, welfare states and homeownership societies. Presently, insurers' annual premiums in life and non-life insurance amount to about *one third* of countries' total social expenditure and life insurance assets alone are equal to banking assets in LMEs and stock market capitalization in CMEs (cf. Figure 1). Contemporary societies spend more on private insurance than ever before (Swiss Re 2020) and ever larger parts of the world population are enrolled in private insurance arrangements (OECD 2020), a development that may be associated with the individualization or de-socialization of risk (Hacker, Rehm, and Schlesinger 2013; Horan 2021). Yet, scholarship on insurance has largely focused on the state as the "ultimate risk manager" (Moss 2004), whereas financialization and CPE scholarship has ignored insurers (e.g. Mader, Mertens, and Van der Zwan 2020) in favor of banks, capital markets or social insurances. Whilst most scholars in this CPE literature acknowledge the existence of insurance companies as important parts of financial and welfare systems, few have ascribed agency to private insurers in shaping the trajectories of capitalist societies.

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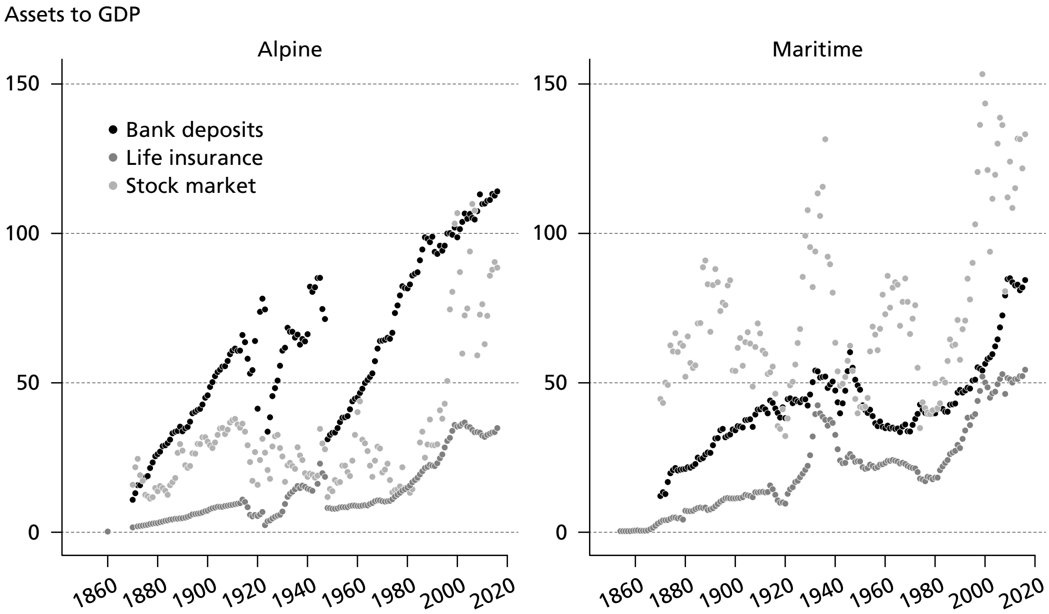
Figure 1 Insurance, banks, and stock markets in Alpine/Maritime countries



See appendix for sources for figures. We report non-weighted averages throughout.

In this paper, we aim to put private insurance on the CPE map by reviewing its role in shaping the trajectories of Western capitalist societies. First, we mobilize new long-run data to build on Michel Albert's intuitive but underexplored distinction between different insurance cultures and to mark out two types of insurance capitalism: "Alpine" countries, as exemplified by Austria, Germany and Switzerland, were late and slower in adopting private insurance, retained many non-market, interventionist elements in the governance of the insurance business and insurers' investment portfolios tended to be less risky. Anglophone "Maritime" countries as exemplified by Canada, Great Britain and the United States, by contrast, were early insurance adopters, in size and demographic penetration, whilst having less state involvement in their more competition-oriented system of governance and a stronger focus on investment in financial market instruments. For most of the history of modern capitalist societies, the Alpines retained a more risk-sharing, stability-oriented private insurance sector. We hence show that there is a clear association between Maritime/Alpine varieties of private insurance and the existing LME/CME and liberal/continental welfare typologies.

While this association is perhaps not so surprising, even if it is evidenced for the first time here, we secondly make the argument that insurers have had active agency in bringing it about. Depending on economic development, private insurance historically preceded both welfare states and the bank/capital market distinction of financial systems and was important in their development by making available the relevant expertise, lobbying governments for privately administered welfare schemes and by making available the capital for capital market development. With the growth of welfare states and financial systems in the twentieth century, they actively pushed for more privatization of the former and securitization of the latter, seeking safe assets to invest in. In the Maritime countries, though, the relatively larger and more advanced insurers were much more able to hinder the development of social security and enable the rise of securities markets. To the extent that the Alpine insurers have started to converge more on the Maritime model, trends towards welfare privatization and capital market investments have also been an increasingly widespread feature there.

The paper fills an obvious private insurance gap that both comparative welfare and finance research have left open. It also fills the comparative gap within insurance research and points to potential complementarities with other institutions that make up countries' arrangements to deal with economic risks: Maritime insurers allowed for smaller public welfare states and provided funds for capital markets to function, while Alpine countries could rather count on stronger public welfare states and channeled funds more into their larger mortgage markets. We observe, as in other domains of finance, that in recent decades the insurance sector has been affected by financialization, which has caused some degree of convergence between the Maritime and Alpine insurance industries towards the competition-oriented Maritime type. With this convergence on the Maritime type, not only have risks become individualized and shifted from the public to the private (Hacker 2006), but the more risk-taking and competition-orientated model of insurance capitalism has gained the upper hand.

We proceed as follows: we first trace how CPE literature of the "varieties of capitalism" (VoC) and welfare direction has forgotten about the comparison of private insurance and then describe the historically divergent insurance trajectory of Alpine and Maritime countries along four dimensions – size, investment strategy, reinsurance size, degree of state involvement. In the following section, we propose a Gerschenkronian explanation of this initially diverging pattern and argue that insurers shaped the complementarity with capital markets and trade-off with welfare states. We conclude by pointing to potential consequences of the convergence on the riskier and risk-individualizing Maritime type.

2 Literature: Between varieties of capitalism and insurance studies

Throughout history, different forms of insurance have existed to protect against a broad range of risks, including the risks of seafaring expeditions, agricultural risks, risks associated with illness and death, natural hazards, and transportation. In its modern guise, insurance leverages the technology of risk to enable the pooling of resources, which can then be used to compensate individual participants in the pool for losses caused by prespecified events (Ewald 1991). In this "actuarial conception" of insurance, individual contributions should reflect individual risk. That is, regardless of whether a risk actually materializes or not, the total premiums an individual policyholder is expected to pay should match the total loss the same individual is expected to incur plus an additional margin to cover the insurer's expenses, including the cost of capital. This basic intuition lies at the heart of a broad variety of insurance arrangements that characterize today's insurance societies.

Despite its ubiquity, little – if any – of the social science literature on insurance has so far analyzed the emergence of different varieties of insurance capitalism from a comparative perspective. By deliberately oversimplifying terms, the vast literature on what we might call insurance studies can be subdivided into three broad categories. First, there are the country-specific and oftentimes also sector-specific or company-specific histories of the insurance business (e.g. Alborn 2009; Borscheid and Haueter 2012; Van Leeuwen 2016). By focusing mostly on individual case studies, this literature, with a few exceptions of two-country (Kingston 2007) or large-n studies (Enz 2000), has not explicitly addressed the question of how and why insurance industries across different countries have come to look so dissimilar for such a long period. A second body of literature rather tends to focus on the practice of insurance, examining, for instance, how insurers "make" risk and how they "market" it (Baker 2021; Lehtonen and Van Hoyweghen 2014; McFall 2011; Van Hoyweghen 2006). This literature has done much to clarify how insurance functions as an institution to produce specific kinds of solidarity among a large and heterogeneous set of subjects. While this literature has contributed to clarifying the institutional logic underpinning insurance, it has not examined the interaction between private insurance and other major capitalist institutions from a comparative perspective. Third and finally, there is the literature describing the larger trends in insurance, pointing, for instance, to the historical emergence of insurance institutions and their relation to broader societal changes, such as the rise of modern welfare states and the increased emphasis being put in modern "governmentalities" on individual responsibility (Baker 2010; Ericson et al. 2003; Ewald 1991; Knights and Vurdubakis 1993; O'Malley 2012). This body of literature is perhaps closest to our objectives here but also lacks a comparative dimension.

While insurance studies themselves have thus largely missed out on comparative work, classical CPE accounts have largely omitted private insurance. This becomes particularly evident in the two adjacent and established comparative research fields on banking and the welfare state, or public insurance. Ever since the first CPE works on comparative finance, the juxtaposition of bank-based versus capital-market-based finance of (industrial) companies (Verdier 2002b) – both in late-nineteenth-century industrialization (Gerschenkron 1966), post-WWII (Zysman 1983) and up to the modern VoC distinction of coordinated (i.e., bank-based) versus liberal market economies (Hall and Soskice 2001) – has pervaded the literature. With very few case-study exceptions (Beyer 2003; Kohl 2022; Kopper 2016), the insurance sector has been completely left out of these comparative and also comparative-historical studies of finance in capitalism.

The comparative study of private insurance pales even more in light of the comparative history of the welfare state (Flora, Kraus, and Pfenning 1983; Lindert 2004) and the enormous industry of social science papers that has developed around the comparison of public insurance in the tradition of Esping-Andersen (1990) and followers. Private insurance mostly figures in this literature as a private alternative to public welfare such that insurance comes into the picture as the "privatizer" of formerly public domains, most notably for pensions (Orenstein 2008) and health (Hacker 2004; Quadagno 2006; Pearson 2020). The crowding out of the public by the private has also been investigated through individuals' attitudes toward private versus public provision of insurance services (Busemeyer and Iversen 2020; Hadziabdic and Kohl 2022) or through private insurance lobbying for welfare privatization (Kemmerling and Neugart 2009; Naczyk and Palier 2014; Röper 2021). Overall, it is fair to say that despite this research about privatization of public goods, private insurance has very much stood in the shadow of its counterpart of comparative public insurance research.

One central exception to this general insurance void in CPE is Michel Albert (1993) who, in his *Capitalism against Capitalism*, popularized the comparison of Rhenish with Anglo-style capitalism by comparing mainly Germany and the US across many domains that would later figure in the VoC framework. Himself a long-time president of the French *Assurances générales*, probably the most informed chapter in the book introduced the distinction between Alpine and Maritime insurance cultures with the Rhine as a demarcation line and France split between them. The Alpines figure as the more risk-sharing, publicly regulated and mutual insurance type emerging through Alpine cooperatives as opposed to the seafaring, risky insurers in Maritime nations. Albert normatively diagnoses the danger of France moving too much in the less gentle Maritime direction. While the distinction is regularly cited in technical insurance research, particularly in the European integration process (Cousy 2004), less than ten of Albert's 1,500 English and 2,150 French google citations (July 2021) mention it, and then only *en passant*.

Another body of literature in the broader political economy literature that has touched on insurers, albeit with relatively little empirical detail, is the patient capital literature. This literature identifies insurance as a potential source of patient capital – that is, investments in equity or bonds with a long-term perspective that shield corporate management from short-term market fluctuations (Deeg and Hardie 2016; Estévez-Abe 2004). Like pension funds, Deeg and Hardie (2016) suggest, insurers' liabilities are relatively fixed. They invest "to meet specific liabilities, and the long-term nature of most of these liabilities results in higher levels of patience" (638). While traditionally market-based countries, like the Maritime countries included in our analysis, relied on insurers and pension funds to supply patient capital, traditionally bank-based countries, like the Alpine countries, relied mostly on the banking system for it.

Overall, then, insurance studies, whether in sociology, history, or science and technology studies, lacks a comparative dimension, while the CPE literature has largely ignored private insurance. Taking our cue from Michel Albert's distinction between Alpine and Maritime insurance and the patient capital literature, we seek to fill the void by examining the role of insurance in different modes of capitalism. In the rest of this paper, we provide empirical substance to Albert's distinction between Alpine and Maritime insurance varieties and use this distinction to understand how the development of private insurance relates to the development of welfare states and financial systems.

3 Alpine and Maritime insurance cultures

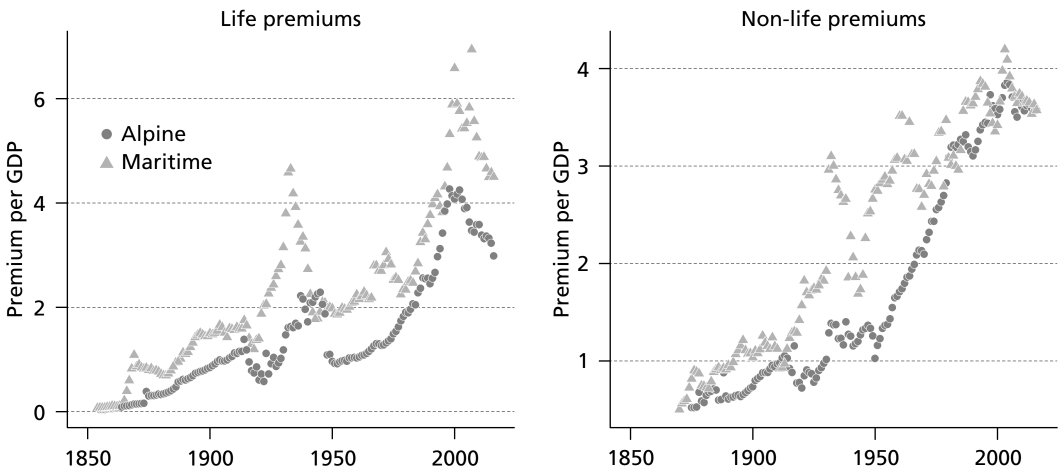
In this section, we characterize the Alpine and Maritime varieties of private insurance, which respectively tend to be characteristic of the CMEs and LMEs central in the VoC literature. It is important to note here that, unlike Albert, we see the Alpine and Maritime varieties of insurance capitalism as descriptive categories that do not point to deep-rooted cultural and geographical traditions of agrarian mountain cooperatives facing terrestrial risks in the Alpine region and of seafaring merchant communities facing maritime risks in Maritime countries (Albert 1993). This explanation reaches back to deep historical-comparative grounds we have very little empirical grasp on. The cultural explanation generally faces the problem of how insurance spreads across different countries despite relatively sticky cultural practices. We therefore rather take the historical association of different types of insurance capitalism with the Alpine and Maritime regions as the basis for developing the Alpine/Maritime varieties of insurance capitalism as descriptive categories that differ along four different dimensions: the size and timing of the insurance industry, the dominant investment strategy, the size of the reinsurance sector and the degree of state involvement in the industry.

Our analysis focuses on six countries in particular, which can be considered the most similar cases within the "groups". This will enable us to find the starkest differences between the Alpine and Maritime insurance varieties. We regard three of the countries, Germany, Switzerland and Austria, as belonging to the Alpine type and Great Britain with its former colonies, Canada and the United States, as belonging to the Maritime type. In what follows, we review how these country groups differ along the four dimensions mentioned above.

Insurance size

Both Maritime and Alpine countries have long insurance traditions and look back to the first marine insurance exchanges in the early modern period, to the first fire insurers in the seventeenth century and the first life insurers in the eighteenth century. The role of the leading Maritime insurance nation was heavily linked with maritime power in general. Since the seventeenth century, therefore, Great Britain with its first incorporated maritime insurers and Lloyd's of London had a privileged position. When speaking of fire and life insurers as private stock companies using actuarial techniques, Great Britain can also be said to have historically led insurance development.

Figure 2 Life and non-life penetration by Maritime and Alpine type

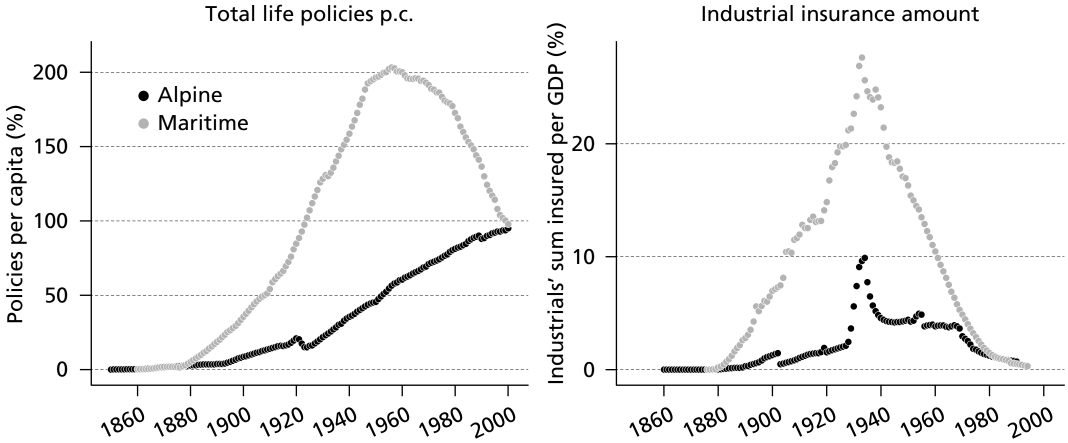


It is difficult to get a good comparative assessment of countries' insurance size before the mid-nineteenth century. Reporting has improved since then, which allows us to trace the evolution of life and non-life insurance by measuring "insurance penetration", the annual premiums paid to insurers in relation to GDP. Life insurance encompasses all the different kinds of policies offered by life companies, i.e., whole life and annuity contracts in the nineteenth century, and later also industrial, group, credit and more investment-like insurance contracts like individual and group pension contracts. Non-life premiums originally consisted only of maritime, transport and fire insurance and gradually expanded into ever more domains, particularly agricultural, automobile, accident, general liability and various other risks.

Figure 2 displays the evolution of life and non-life penetration averaged over Maritime and Alpine countries since the late nineteenth century. Both country groups follow broad general trends: they both have a general growth trend, slower in the earlier years, particularly fast in the later twentieth century and plateauing or even declining in more recent years. In both country groups, the two World Wars and the Great Depression also stand out as periods of troughs and peaks. During the wars, the international insurance business collapsed. Particularly in hyperinflation-ridden Germany and Austria, insurers lost the majority of their reserves. During the Depression, GDP declined rapidly, while premiums continued to flow due to contractual obligations, but also with a precautionary savings motive in light of failing banks (Degorce and Monnet 2020). Here also, the failure of the largest European life insurer, the Austrian Phönix, made life more difficult in Alpine than in Maritime countries (Lembke 2015).

Beyond common trends, however, Maritime countries have had more pronounced insurance development in all domains, lying ahead of their Alpine counterparts in both mean and median (not shown) in almost all years with few wartime exceptions. The mean difference across all years is 0.7 percentage points per GDP for life and 0.5 for

Figure 3 Life insurance policies per capita (percent) and industrial insurance penetration



Note: Canada excluded; some missing postwar data in GBR/AUT were interpolated using Stineman's algorithm.

non-life insurance. Similar figures could be shown for USD-denoted insurance density, i.e., per capita premiums, even though historical exchange rates do not control for purchasing power parity. These differences are driven more by some countries than others. In the Maritime group, it is first the UK, then Canada and the United States that push this country group ahead, whereas it is more Austria and Germany that pull down the average. However, even in Switzerland insurance penetration is lower than in the Maritime countries throughout all periods.[1] Yet, differences in insurance penetration in Alpine and Maritime countries have decreased in recent decades. This is partly driven by the catch-up of the two hyperinflation victims, Austria and Germany, since the 1980s.

Insurance has also been relatively more widespread in Maritime countries. Policies can cover multiple persons and one person can buy more than one policy, but the share of policies by population still gives a rough idea of how broadly life insurance was spread within the population. As the left-hand panel of Figure 3 reveals, before 1880 life insurance covered less than 5 percent of the population and countries' differences were not so pronounced. Already by 1900, however, there was a clear divide between Maritime and Alpine countries, the former reaching more than 50 percent coverage by the interwar years, the latter lagging several decades behind in policies per population. The crucial factor driving the differential adoption speed in policy numbers was the faster spread of the industrial or small life insurances, which targeted lower-income populations. As the right-hand panel of Figure 3 shows, the total sums insured by these small insurances with weekly premium collection, used for burials in the Maritime countries and more generally in the Alpines (Eriksson 2015), was again clearly higher in the former than in

1 If we were to include more (former) Commonwealth and continental countries as potential further country cases for the Maritime and Alpine side, respectively, the case for two distinct evolutions would be even stronger.

the latter. After WWII, ordinary life policies became the standard and industrials first stagnated and then declined. With their disappearance, the country-group differences were evened out in the 2000s.

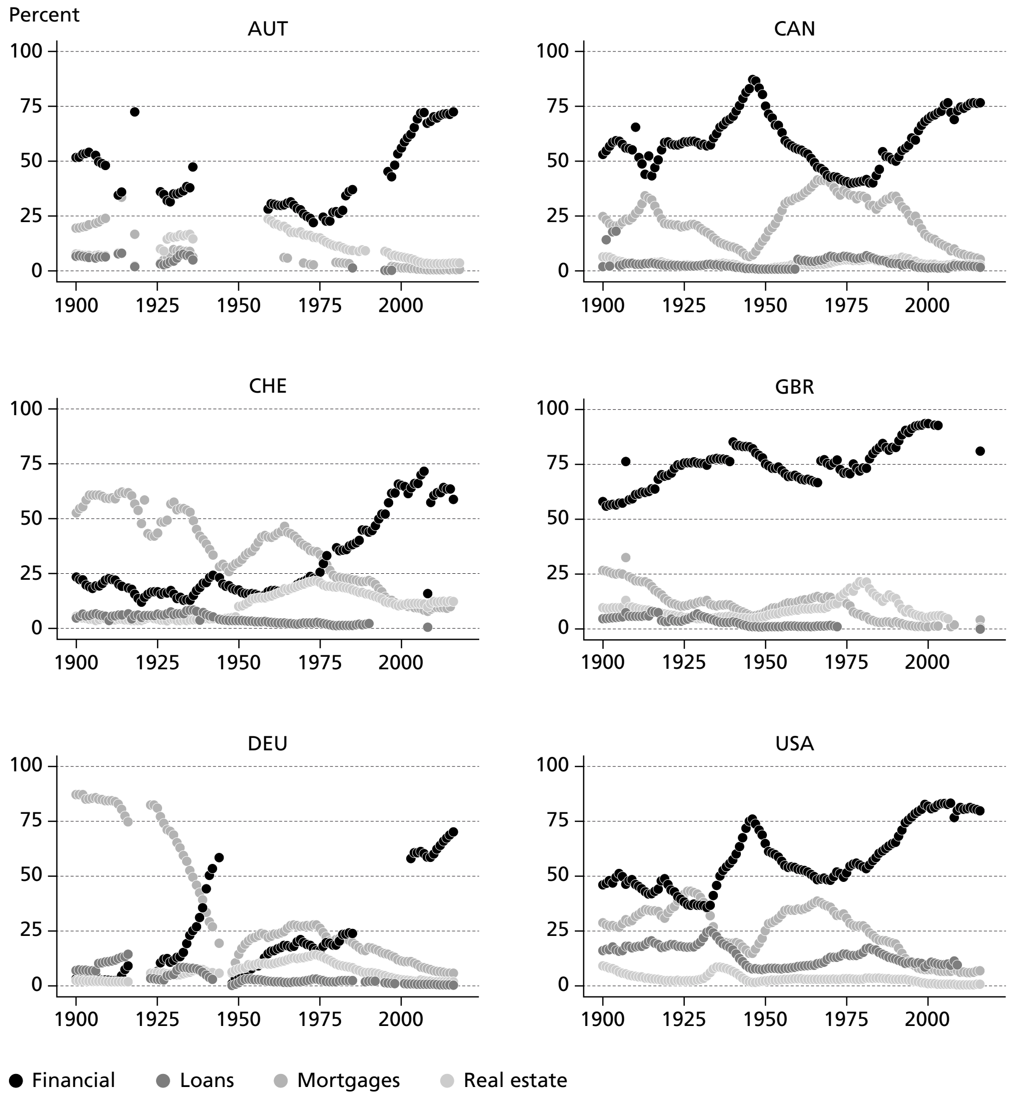
"Market-based" versus non-market-based portfolios

Another dimension along which Alpine and Maritime insurers differed is their investment behavior. Life insurers accumulate considerable assets over time and their investment strategies tend to correlate with nationally specific regulations and patterns. Both Maritime and Alpine insurers generally follow a common trend: starting from mortgage-dominated portfolios in the nineteenth century, they gradually shift their assets to tradable financial securities such as stocks and bonds (Kohl 2022). Figure 4 displays the portfolio breakdown by asset class in the different countries. Mortgages follow countries' construction cycles but, overall, their share decreases to the point of not even figuring as a separate asset class in official statistics. Financial assets, by contrast, are the main beneficiary of this trend throughout countries: pushed by more or less compulsory investment in government bonds in wartime, insurers gradually shifted their assets to more bonds and stocks over time.

Beyond this common trend, however, there is a clear difference again with much earlier and larger portfolio shares in financial assets in Maritime countries and the Alpine countries with much higher initial investment shares in mortgages/real estate and a slower transition to financial assets. Within country-types, there are, of course, certain differences: Germany's historically almost 90 percent mortgage investment was extreme even among the Alpines. In Figure 4, Austro-Hungarian insurers seem to defy this neat distinction at first sight. Firstly, however, these insurers maintained large shares of direct ownership in real estate. And, secondly, the Alpine countries had a large secondary mortgage market, which was almost nonexistent in the English-speaking world (Kohl 2015; Snowden 1995). Between 30–40 percent of the investments by Austro-Hungarian insurers in "financial assets" were covered mortgage bonds issued by mortgage banks (Ehrenzweig various years). The overall dependency on the property sector is prevalent throughout the Alpine world and corresponds to the more pronounced development in fire rather than life insurance. Within the Maritime world, by contrast, American insurers were known for their strong investments into corporate, particularly railroad bonds since the late nineteenth century (North 1952), whereas British insurance investors, to an extent also Canadians (Drummond 1962), shifted to stock investments already in the interwar years (Scott 2002).

A convergence on portfolios dominated by investments in financial securities becomes noticeable only in the post-1980 world. This institutional difference is associated with insurers having different risk profiles: the stronger real estate dependent Alpine insurers de-

Figure 4 Portfolio shares of life insurers by asset class



pend on fluctuations of real estate and potential mortgage defaults as main financial risk, whereas Maritime insurers depend much more on the price volatility of bonds and stocks.[2]

2 A product-level equivalent of the different portfolio composition is the greater importance of annuity products in Maritime countries compared to similar pension products offered by Alpine countries. Contrary to ordinary life insurance, such as whole-life or endowment policies, annuities protect beneficiaries against the financial risk of outliving their means. In ordinary life insurance, insurers collect premium payments, which they then invest to pay a lump sum upon death (or earlier, e.g. in the case of endowment policies); in contrast, in the case of annuities, insurers receive a lump sum payment to provide the beneficiary with a regular stream of income. This type of product lends itself well for investment in fixed-income securities, the interest payments of which insurers may seek to match with the payments associated with an annuity book.

Size of reinsurance

Another line of demarcation between the Alpine and Maritime insurance world regards how direct or primary insurance companies, particularly in non-life, cede part of their risks to independent reinsurance companies that insure exceptional risks. Traditionally, Maritime countries had used unincorporated reinsurance through Lloyd's or co-insurance, i.e., their direct insurers ceded part of their risk to other direct insurers. Incorporated reinsurance ran afoul of regulatory restrictions. In the UK, for instance, reinsurance of marine insurance was banned by the anti-gambling regulation in place between 1746–1846 (Pearson 2016). In the US, it faced the fragmentation of state regulation (Werner 1993). Alpine countries, by contrast, not only founded the first reinsurers around 1850 but also started to export reinsurance to other countries in their drive to go beyond the narrow confines of the Alpine valleys and to diversify risks (Pearson 1995). The biggest Alpine reinsurance companies, Munich Re and Swiss Re, had an estimated market share of about 90 percent before World War I and, while the collapse of international insurance markets interrupted their development, contemporary rankings of biggest reinsurers still have the Alpine ones at the very top (Straus and Caruana de las Cagigas 2021). This is also reflected in the reinsurance penetration of their economies. German and Swiss reinsurers developed quite early and by World War I already collected about 1 percent in national and international premiums per GDP, about the size of life or property insurers at the time. Over time, this amount increased to about 3 percent in Germany and even 6 percent in the much smaller Switzerland, while the initially similar Austrian industry was largely absorbed, such that reinsurance written in Austria today comes from primary insurers only. Whereas a century ago, about half of all business was still domestic, Alpine reinsurers have since started to reinsure the entire world in their quest to diversify risks. In the Maritime countries, by contrast, no similar statistics are even consistently reported, as reinsurance has for a long time not been organized around specialized reinsurance corporations.

Public elements in the insurance market

A final dimension along which the Alpine and Maritime world of insurance differ is the relationship of insurance with the state. We distinguish between three different aspects of states' involvement in insurance: through ownership of public insurance companies, state supervision of insurers' investment practices, and price regulation. In this section, we describe how the Alpine and Maritime varieties of insurance capitalism differ from each other in each of these three aspects.

State-associated insurance enterprises

A distinct feature of Alpine insurance capitalism is the existence of state-associated insurance enterprises, which were founded either as independent insurance enterprises or were set up as the insurance branch of the public and cooperative banks characteristic of Alpine countries. The practice of state-owned insurance enterprises reaches back to the cameralist tradition of compulsory and state-owned fire insurers on the European continent at about the time England opted for the first private joint-stock companies after the Great Fire of London in 1666 (Zwierlein 2021). During much of the eighteenth century, Alpine fire insurance industries were composed of domestic municipal- or state-owned insurers and British private insurers. Only in the nineteenth century did domestic private insurers enter the market. Still in the twentieth century, state-based fire insurers could maintain about half of the property insurance market in Switzerland, whereas similar institutions were virtually absent in the Maritime countries. One prominent exception is US flood insurance, where the federal state became the main provider of flood insurance protection in the second half of the twentieth century due to commercial insurers' unwillingness to provide protection; even so, these policies are increasingly based on private insurance models and are often sold through private insurance fronts (Elliott 2021), meaning that the exception of flood insurance rather confirms the rule.

In the late nineteenth century, states also became active in the domain of life insurance. This was usually driven by social reformers who wanted to spread insurance throughout the country and among parts of the population not normally served by the then existing commercial life insurers, who catered mostly to the (upper) middle classes. Another reason for state intervention was war-related life insurance, which commercial insurers were unwilling to provide. State-associated life insurers were founded in different institutional arrangements: a corporatist public life insurer in Germany in 1911, postal insurance in Great Britain, state-led insurers in Denmark and a nationalization of private insurers in Italy. The success of these institutions differed widely and generally depended on whether they imitated private competitors or not. In Germany, public insurers in life and non-life have generally had slightly over 10 percent market share, in Austria cooperative insurers are among the top firms, while in Switzerland, public fire insurers still have a considerable market share.

Regulation and supervision

The second aspect of Alpine state involvement in insurance concerns insurance regulation and supervision. For Albert, the regulatory dimension was key to identifying the two different insurance cultures. Characteristic of the Alpine model, Albert writes, is that "insurance is first and foremost an institution, and the markets must be strictly regulated to suit its needs" (90). In the Maritime model, on the other hand, "insurance is primarily a market and, as such, must be subject to the basic laws of open competition, unregulated and unrestricted apart from the obligation to stay within certain solvency margins" (90). We summarize some of the key features of the regulatory regimes in Table 1, containing two snapshots from 1900 and 1950.

The British style of insurance regulation emerged from the mid-nineteenth century onwards and became known as a regime of "freedom with publicity". Although the basis of the regime was laid by the 1844 Joint Stock Companies Act, the regime acquired its most characteristic features with the adoption of the 1870 Life Assurance Companies Act. This regime basically refrained from imposing any restrictions on insurers' business activities, as long as insurers made their financial statements publicly available, including the methodologies underpinning the actuarial valuations of their liabilities (Booth 2007). The idea behind this was that if actuaries and other interested parties could scrutinize companies' accounts, fraudulent schemes and companies in dire financial straits could easily be detected. This regulatory style gave actuaries a key position within the insurance business, or at least the life insurance business, where they had to negotiate among various different conflicting interests.

In the United States and Canada, state supervision was more developed but still mainly aimed at setting the basic rules for competition among insurers. With the setting up of the first supervisory bodies in New Hampshire (1850), Massachusetts (1855) and New York (1859), US supervision became a state-level issue (Brock 1990). From the late eighteenth century onwards, however, it also acquired a federal component with the setting up of the National Convention of Insurance Commissioners (NCIC, later renamed as the National Association of Insurance Commissioners or NAIC) (Kobrak 2012). Although the stringency of solvency regulation varied from state to state, state-level supervisors often imposed deposit requirements, reporting requirements, a licensing system and quantitative restrictions on insurers' investments, capping, for instance, investments in stocks, real estate and mortgages. Following the Armstrong Committee in 1906, for instance, New York prohibited investment in a number of assets including stocks, a restriction that was lifted in 1951 (Meier 1988, 62). Even if there has been a lively debate about whether and how these restrictions actually influenced insurers' portfolio allocations (Henebry and Diamond 1998; Hershman 1977), the investment restrictions eased with the more general trend towards financial liberalization in the 1970s and 80s. The NAIC, however, still sets quantitative restrictions on insurers' investment practices today (R. W. Klein 2012).

Canadian insurance supervision developed a little later, from 1868 onwards, and is characterized by a strong focus on protectionist measures preventing capital from flowing out of the country through its foreign-dominated insurance industry (Darroch and Kipping 2012, 255–56). The two legislative acts of 1875 and 1877, for instance, required insurers to publish their financial accounts and to prove they held enough Canadian assets to back their Canadian insurance obligations. Supervisors, moreover, imposed investment restrictions that were skewed in favor of the large domestic insurance enterprises Sun Life and Canada Life until the Great Depression. After the near collapse of Sun Life in 1931, supervisors capped all insurers' investments in common stock at

15 percent (Pfeffer 1955, 67). Even if the commercial freedoms enjoyed by insurance enterprises in Northern America paled in comparison to those on the British Isles, the main purview of supervision was to define the rules of the game (whether protectionist or not) in an otherwise competition-driven market.

Alpine governments, in contrast, adopted a more interventionist approach to insurance supervision, which became known under the label of *materielle Staatsaufsicht* (material state supervision). The Austrians were the first to adopt a major supervisory regulation with the *Assekuranz-Regulativ* of 1880 and the setting up of a specialist insurance bureau, the *Assekuranzbüro* (Ogris 1988). Although this supervisory framework initially resembled a slightly more restrictive variation of the British "freedom with publicity" approach, a more interventionist style of regulation developed later. Switzerland made a major stride in this regard in 1885, when it set up the Federal Insurance Office (the *Eidgenössisches Versicherungsamt*), which was endowed with the power to impose restrictions on insurers' investment choices as well as business practices more generally. The supervisory agency required insurers to ask the supervisor for approval of its tariffs, required them to pay license fees in proportion to overall business and standardized insurance contracts (Lengwiler 2012, 150). In 1901, the German government followed with the adoption of the *Reichsgesetz über die privaten Versicherungsunternehmungen* and set up the *Kaiserliche Aufsichtsamt für Privatversicherung* (Imperial Supervisory Office for Private Insurance), which later became the *Bundesaufsichtsamt für das Versicherungswesen*. Like the Austrian and Swiss regimes, the German regulatory regime was based on the "concession principle" meaning that insurers could only conduct business when they had explicit regulatory approval. In its early years, the supervisory body required the separation of life and non-life business, imposed stringent accounting rules (e.g. requiring insurers to discount their liabilities at 3.5 percent) and investment restrictions,[3] and standardized insurance contracts (Koch 2001), significantly curtailing space for product innovation and innovative investment strategies as competitive considerations.

Another dimension in which the Alpine and Maritime insurance cultures differ is the relative dominance of different accounting traditions. Alpine insurance tends to place heavier emphasis on book-value reporting, while the Maritime insurance culture seems

3 The investment restrictions were especially strong in Germany. The insurance laws of 1901, for instance, inhibited investments in stocks, corporate bonds and foreign assets, leaving insurers to invest in domestic government debt, municipal debt and, most importantly, mortgages. The restrictions were briefly alleviated in 1923, when hyperinflation made clear that fixed-income investments also carried substantial risk; after the great crash, the German government again reinstated a ban on investment in stocks and corporate bonds in 1931 (von Bargen 1960). In 1952, the absolute ban was replaced by quantitative restrictions: German insurers were now allowed to invest at most 10 percent of their total assets in stocks. Although quantitative restrictions on stock investments remained in place until well into the twenty-first century, they became gradually less stringent, especially when the integration of European insurance markets picked up pace in the 1990s. The implementation of the Third Life and Non-Life directives gave insurers increased capacity to invest across borders (Knauth 2003, 153–57).

Table 1 Overview of regulatory regimes in 1900s and 1950s

	1900s				1950s		
	First major supervisory laws	Supervisor	Investment restrictions	Asset accounting	Supervisor	Investment restrictions	Asset accounting
GBR	1844/1870	Board of Trade and Industry	None	Not regulated; "never write up, always write down"	Board of Trade and Industry	None	Mixed
US (NYC)	1828/1859	New York State Insurance Department	Weak	Market value	New York State Insurance Department	Strong	Market value
CAN	1875	Department of Insurance (Ministry of Finance)	Weak	Market value	Department of Insurance (Ministry of Finance)	Moderate	Market value
DEU	1901	Kaiserliche Aufsichtsamt für Privatversicherung	Strong	Book value	Bundesaufsichtsamt für das Versicherungs- und Bausparwesen (1951)	Strong	Book value
AUT	1880	Insurance Department (Ministry of the Interior)	Moderate	Book value	Insurance Department (Ministry of Finance)	Moderate	Book value
CHE	1885	Eidgenössisches Versicherungsamt	Moderate	Book value	Eidgenössisches Versicherungsamt	Moderate	Book value

to give preference to mark-to-market accounting. Prior to 1931, for instance, Canadian and US insurers recorded their assets at market value where possible. Following the near collapse of Sun Life in 1931, Canadian supervisors suspended the requirement to mark assets at market value (Kryzanowski and Robert 1998). After a brief period in which insurers recorded their assets at "authorized" values, the mark-to-market model was resumed. In the Alpine countries, on the other hand, insurers recorded their assets at book-value, which articulates well with investments in relatively illiquid assets and contributes to the stability of insurers' balance sheets and the accumulation of hidden reserves. In the UK, accounting methods were determined by actuarial discretion and, as a result, practices have tended to be more mixed. Up until the 1940s, common practice could be summarized in the words "never write up, always write down" – that is, record assets at book value, and adjust the book value only when the market value falls below it. From the 1940s onwards, however, anecdotal evidence suggests that market values became increasingly popular, especially in combination with gross premium valuation for internal solvency assessment purposes. For regulatory returns, however, most actuaries stuck to some sort of book-value reporting (Turnbull 2016). Table 1 gives a summary overview of the countries' different regulatory regimes as of 1900 and 1950.

Price regulation

Another element in which the Maritime and Alpine insurance traditions are distinct concerns the rules and regulations around insurance pricing. Whilst regulators rarely dictate the terms of insurers' policies in Maritime countries, enabling price- and design-based competition among insurers, we can again observe a more interventionist approach in the Alpine countries, where price regulation is seen an important aspect of the material state supervision approach. Although it is difficult to assess the extent to which price-setting is controlled in practice – price control mechanisms need not be explicitly encoded in law but may, for instance, also come in the form of state-backed cartelization (Baranoff 2003; Espeli 2020; Hautcoeur 2004) – the presence of explicit price-setting regulations and the high degree of state-enforced standardization of insurance contracts nonetheless sets the Alpine variety of insurance capitalism apart from its Maritime counterpart.

Exemplary in this regard is the pricing of motor insurance, which in Germany was subject to a "unitary tariff" for motor insurance from 1938 onwards (Everson 1996, 208–9). Although the unitary tariff for motor insurance was abandoned in 1962, insurance supervisors continued to have a strong influence on insurers' premium rates (Everson 1996, 211). Up until the 1990s, they produced standardized risk calculations in collaboration with insurers who could then mark up these standardized rates within a pre-specified range of 3 percent over the "economic cost" of the risk (Rees and Kessner 1999). In the UK, in contrast, insurers determined their own rates, relying on both collectively produced risk knowledge and proprietary risk information. Though British insurers still came to collective agreements regulating competition, for instance through fixed commissions to insurance sales agents, there was no regulatory enforcement of standardized premium setting (Carter and Falush 2009, 154; Finsinger and Pauly 1986; Westall 2006). This example illustrates the difference between the Maritime focus on actuarial fairness and risk calculation and the stability oriented and competition restraining approach in the Alpine countries.

4 Insurance: A historical life of its own and force to reckon with in welfare and corporate finance

So far, we are in agreement with Michel Albert's intuition that the development of private insurance in Alpine and Maritime countries moved along different trajectories, comparing the development and composition of private insurance across six countries. At first sight, the distinct types of private insurance seem to fall in place nicely with the existing welfare and VoC typologies (cf. Table 2), where liberal welfare states and LMEs with market-based corporate financing (perhaps unsurprisingly) are also characterized by Maritime insurance features. This could give the impression that the distinct developmental trajectories of the Alpine and Maritime insurance industries are simply a symptom of the

Table 2 Historical overview of broader security arrangements

	Anglo	Northern Europe
Welfare state	Liberal	Universal/Conservative
Corporate finance	Market-based	Bank-based
Private insurance	Maritime	Alpine

same underlying trends that differentiated liberal from universal/conservative welfare states, and market-based from bank-based financial systems.

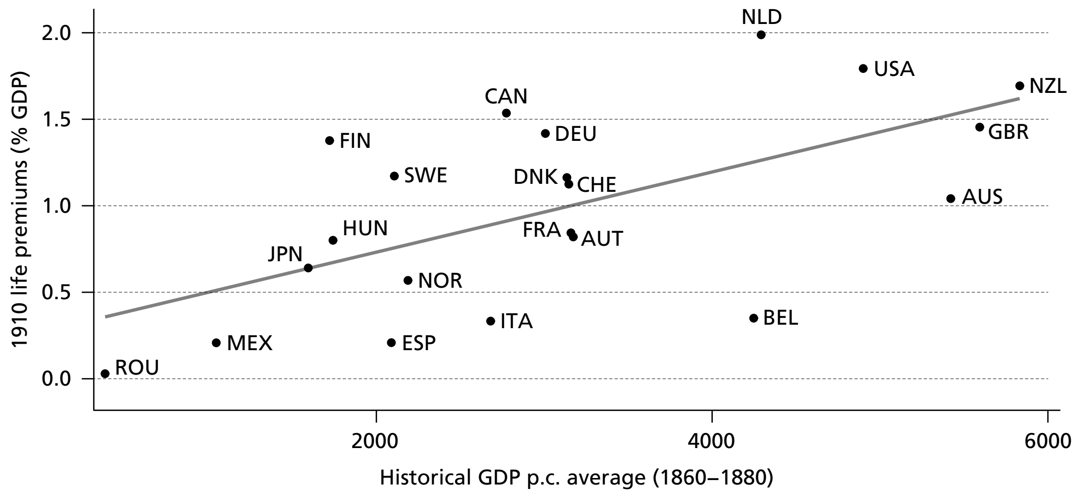
In this section, we oppose this simple view and argue for a distinct role of private insurance in *shaping* welfare states and parts of the VoC architecture in three moments. First, the existence of private insurance precedes welfare states and VoC, and the emergence of two types of insurance capitalism therefore cannot be explained by the existing typologies. Instead, we claim that a Gerschenkronian story of economic development best captures the Alpine/Maritime origins: the later a country developed, the more Alpine its insurance type. Second, by preceding the public welfare state and expanding massively alongside it, private insurance has influenced the rise and shape of public welfare: Maritime insurance has rather retarded public welfare and made it more rudimentary. Third, by co-originating with capital markets, insurers were important in creating and maintaining securities markets, first for corporate bond, then public bond and stock markets: Maritime insurers were more likely to foster the growth of securities markets, providing an alternative to bank-based corporate finance.

Causes of divergence: Alpine and Maritime insurance trajectories

Because the rise of private insurance largely predated the welfare and financial system typologies, the emergence of the two types of insurance capitalism cannot be explained by differences in public welfare and corporate finance regimes. Private insurance did not simply fill the gap left by states and banks confronted with a rising demand for welfare and financial capital but helped create it. The annual expenditure of life insurers, for instance, exceeded countries' pension expenditure even in countries like Germany until about 1950 (Horn and Kohl 2021). Why then have financial systems differed with regard to insurance?

Among the theories of financial system development (Verdier 2002a), a classical account is to start from a country's level of development. Richer countries have more possibilities and demand for a differentiated financial system (Goldsmith 1969) and late developers have to overcome problems of scarcity by relying less on equity and more on banks or even state finance in their collective effort to catch-up in a big economic spurt (Gerschenkron 1966). We suggest that economic development theories such as these also provide a model for explaining the differentiated development of insurance industries across Alpine and Maritime countries in a way that does not require the cultural/historical style of explanation found in the work of Albert.

Figure 5 Historical economic development and insurance levels



Historical GDP per capita in the mid-nineteenth century offers a relatively clear picture of insurance development until World War I (Bolt and van Zanden 2020), with richer Maritime countries having on average the highest levels of (life) insurance penetration, i.e., total premiums controlled for GDP, followed by their poorer Alpine counterparts. In broader comparative perspective, Scandinavian countries and Japan are closer to Alpine insurance while Catholic countries are a distinct underinsured group (Figure 5). The picture looks similar for non-life or total premiums for which we have less country coverage. The insurance industry had to rely on a number of stable background conditions that earlier developers were more likely to provide, including stable currencies, stable mortality figures relatively undisturbed by pandemics, a cooperating banking sector, and markets for long-term investments. The more recent evidence on economic and insurance development supports the generally positive association between GDP growth and insurance development, often finding an S-shaped relationship (Enz 2000): steeper in the historical beginnings of lower insurance levels, it tends to level off in the more developed, insurance-saturated countries.

The stage of economic and financial development not only explains the historically different depth of insurance penetration but also the second dimension separating the Alps from the sea: with less developed economies came less developed securities markets and the relative importance of tangible rather than financial wealth. Maritime insurers, consequently, were able to invest more in financial markets, whereas Alpine insurers remained more attuned to the property sector, investing above all in mortgages. Real estate was the dominant insurance investment in very late developers in Southern or Eastern Europe.

Finally, economic development was also an indirect determinant of how important direct and reinsurance markets were in the countries. The historian Robin Pearson describes how the early developer British insurers had started to capture primary insurance markets at home and even worldwide at a time when late developers often just had old-fashioned public fire and pension insurance. Once they developed private primary insurers as well, they were not able to compete with British insurers in export markets but had developed the reassurance institutions that instead were driven into worldwide risk diversification (Pearson 1995).

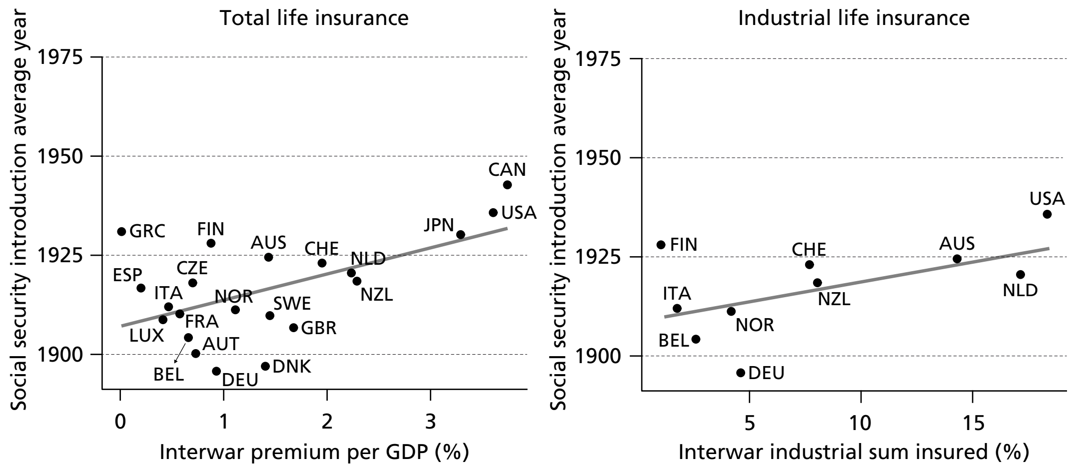
Where economic development was slow and capital for joint-stock companies was scarce, governments tended to support the insurance sector directly, which is the fourth dimension distinguishing Alpine from Maritime insurance. Large "baroque" bureaucracies in those countries, including civil servant pensions and state fire insurers (Blackburn 2002; Zwierlein 2021), were important antecedents in late developers. One key motivation behind setting up protectionism for one's own private insurance industry or founding state-related insurers outright was to prevent capital from flowing out of the country through foreign insurers. Hence many early regulations in later developers included protectionist measures either requiring foreign insurers to keep their assets in the country or giving domestic insurers a competitive advantage. Many state-related or public insurers were set up with the goal of providing the state or certain groups with insurance assets to be used for mortgage and public investments, for instance in Germany, or public finance in Italy. Late development hence correlates with an interventionist approach to insurance (Everson 1996, 205).

Insurance and welfare

Since private insurance largely predated and to a certain extent even preempted welfare reforms, welfare states are rather unimportant in understanding differences in the origins of the two insurance cultures. This was the case not only in Maritime countries but also in the Alpine ones. Fire insurance, for instance, predates Bismarck's first insurance laws by more than two centuries and the institutional form of fire insurance strongly resonates with the later twentieth-century welfare typologies in the social security domain (Zwierlein 2021): there were private stock companies in Maritime countries, mandatory public insurers in Alpine countries and hardly any in Catholic ones. When Bismarck implemented compulsory social insurance, he could draw on a century-long model practiced in fire insurance. The organizational form of pre-existing insurance arrangements, in other words, provided a template for the welfare arrangements that developed from the late nineteenth century onwards, which became instrumental in resolving conflicts between labor and capital (Ewald 2020; Knights and Vurdubakis 1993).

Whilst the relation between public welfare and private insurance is often understood in terms of crowding out, the extent to which this is true varies over time. When public welfare arrangements were first created, the relation between public welfare arrangements and private insurance was predominantly competitive. Public insurance tended to limit the growth potential of private insurance, especially with respect to industrial insurance (Andersson and Eriksson 2015); and the existence of private insurance in

Figure 6 Social insurance introduction years and historic life insurance

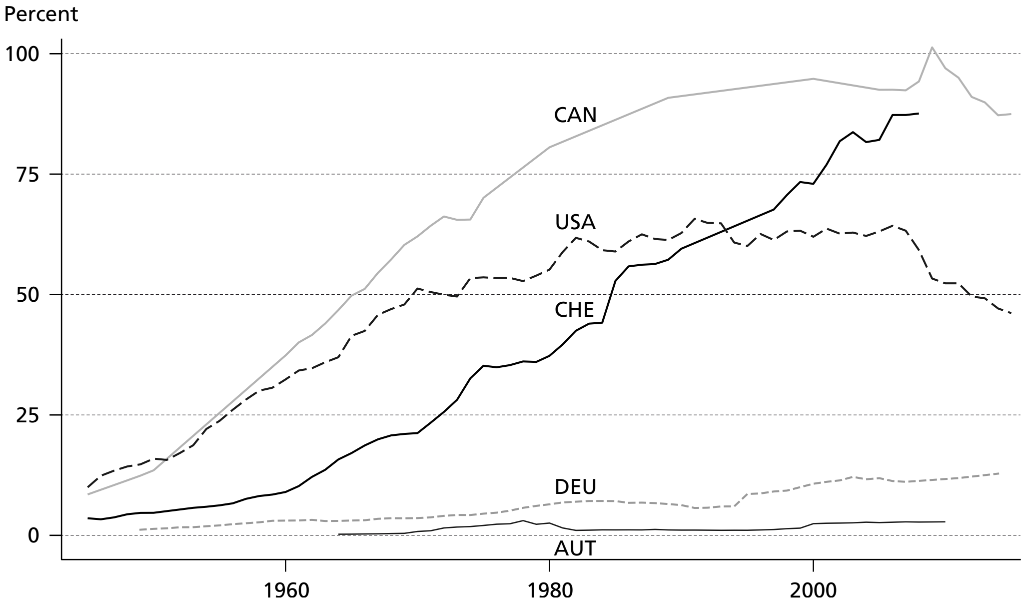


Note: Social security reform years taken from Schmitt et al. (2015).

turn delayed welfare reforms or limited the scope of the reforms to basic security arrangements to be topped up by private products. This shows in the timing of welfare reforms: on average, the larger the life and industrial insurance sectors were before World War I, the later big social security reforms were passed (Figure 6). During the strong growth of public welfare in the 1950s–70s, however, private insurance saw a rapid expansion, especially in countries relying on privatized social insurance such as the Maritime ones. This is most obvious in the US, but private insurance is also a prominent source of welfare in the UK and Canada, though more limited in scope and mostly focused on old age insurance. Since the 1970s, though, Alpine insurers have caught up with their Maritime counterparts, as governments in OECD countries increasingly sought to retrench welfare spending (Höpner et al. 2009).

The differentiated paths of the insurance sectors during postwar economic development can perhaps best be explained by path dependencies. The Maritime model of insurance capitalism placed insurers in a good position to benefit from the expanding welfare arrangements. As noted earlier, the maritime variety of insurance capitalism was more focused on competition and product innovation, which enabled private insurers to respond quickly to the new demands of postwar industrial capitalism. Most insurers in Maritime countries, moreover, already had significant experience with underwriting relevant risks, partly in the form of industrial insurance and partly in the form of group insurance. American life insurers like the Equitable Life Assurance Society and Metropolitan Life, for instance, had already started selling group insurance to businesses as early as the 1910s and 1920s, providing coverage for life, accident and sickness risks as well as pensions (J. Klein 2010, 10). US business exported its model of corporate welfarism into Canada, where in the early twentieth century the business community similarly perceived group insurance as a means to do "away with a great many labor troubles, discouraging strikes and generally improving the morale of the employees"

Figure 7 Group insurance in force relative to GDP



(McCallum 1990, 51). Through the UK branch of Metropolitan Life, group insurance for old age pensions was also introduced in the UK in the late 1920s, partially replacing endowment assurances as the dominant product sold by life insurers to enable saving for retirement (Hannah 1985). For many social groups, the protean group-insurance schemes alleviated the necessity of setting up state-sponsored social insurance schemes. In Austria and Germany, by contrast, the generally weaker insurers had been devastated by a complete erosion of their assets through hyperinflation. Funded pensions through group insurances were also introduced after World War II but had not been adopted as a general product by businesses and insurers (cf. Figure 7), who were unable to prevent the PAYGO pension reforms after WWII.

Switzerland is the exception that confirms the rule. The Swiss "labor relations and welfare configuration", Leimgruber observes, "strikingly echo those in the United States" (Leimgruber 2008, 18). In the second half of the nineteenth century, close business coordination had led to the setting up of a mutual insurance firm that was intended "both as a vessel to centralize savings in a period of industrial expansion and as a way to ensure political and social stability by encouraging life insurance and thriftiness" (Leimgruber 2008, 47). It did so by selling group contracts and a Swiss version of industrial insurance well in advance of the development of modern social insurance schemes, thereby alleviating the necessity of more state-led social insurance arrangements. What the Swiss case suggests, then, is that the existence of a strong private insurance sector with the capacity to assert its preferences in the social policy domain matters greatly for the development of public welfare arrangements.

Countries with large private insurance sectors thus not only had the capacity to provide an alternative for public welfare schemes; they were also better equipped to collectively organize and lobby against public welfare solutions (Dobbin 1992). These insurance lobbies tended to tap into the emerging "politics of security" by emphasizing the role of private insurance as a supplement to basic public welfare arrangements, aiming at tax exemptions and limited public security, as shown for the US (Hacker 2002; J. Klein 2010) and Canada (Bryden 1974). In the UK, for instance, the Life Offices Association embarked on an expensive but successful PR campaign to thwart Labour Party proposals for an earnings-related national superannuation scheme (Pemberton 2012). Similarly, Swiss private insurers were able to insert their preferences in the making of a federal welfare state, for instance through the mechanism of revolving doors: indeed, the careers of key policymakers "straddl[ed] the first two pillars of the old age provision" (Leimgruber 2008, 13).

Another factor solidifying the path dependencies that put Maritime insurance culture on the path towards highly privatized welfare arrangements was insurers' knowledge lead. Private insurance companies had been accumulating business experience and statistics on mortality, invalidity and accidents, which made them important interlocutors when the first public welfare reforms were passed (Ewald 2020; Knights and Vurdubakis 1993; Lengwiler 2006; Rohrbach 1988). The epistemic foundations of public insurance thus directly rested on private business experience.

Actuarial knowledge and expertise played an important role in the design of the welfare states across countries. But this expertise served as a conduit for the preferences of private insurers in some countries more than in others. In the Maritime countries, the actuarial profession became formally institutionalized with the setting up of the English Institute of Actuaries in 1848, the Scottish Faculty of Actuaries in 1856, and the Actuarial Society of America in 1889. Although the actuarial profession in the Anglo-Saxon world benefited initially from its close ties to statistical theory, it later distanced itself from the world of science, occupying a more prominent role in the management and governance of private insurance business instead (Alborn 1994). In the UK, for instance, actuaries took up prominent positions on the boards of insurance companies well into the late twentieth century (Collins, Dewing, and Russell 2009; O'Brien 2016). Actuaries were also employed by the government but, rather than having a distinct professional identity, they seemed to serve more as an outpost of the profession.[4]

In the Alpine world, the institutional embedding of actuarial expertise was quite different. In Germany, actuarial expertise became more firmly institutionalized in bureaucracy and the university system through the protean academic discipline of *Versicherungswissenschaften* or insurance sciences in the late eighteenth century. Within this setup, Ger-

4 In the UK, for instance, the actuarial profession acquired an outpost in the government through the function of Government Actuary (which later got its own department), initially appointed to advise on social security policy (Daykin 1992, 326–27).

man actuarial expertise maintained closer ties to the related disciplines of statistics and political economy and became wedded not mainly to the private insurance sector but to insurance more generally, encompassing both private and social insurance (Lengwiler 2003). In Switzerland – again the exception that confirms the rule – the timing of the institutionalization of actuarial expertise was similar but attempts to develop an insurance science failed due to the fact that the development of a social insurance bureaucracy was much more protracted, which gave private insurance representatives (who tended to favor the more British model of actuarial sciences) a stronger say in the institutionalization of actuarial expertise (Lengwiler 2003). Private insurance interests subsequently gained strong footing in the development of social policy by systematic representation in the commission of experts on social insurance (Leimgruber 2008, 47–48).

Whilst the differences between Alpine and Maritime social security arrangements were still clearly pronounced in the 1970s, from the 1980s onwards they started to dissipate. One crucial factor in this process, we suggest, was the catching up of Alpine insurers and the concomitant disappearance of differences between the Maritime and Alpine insurance systems in terms of size, composition of investment portfolios and regulation (see section 2). In Europe, the integration of insurance markets initiated a trend towards the liberalization of the German and Austrian insurance markets and facilitated cross-border entry among EU member states (Quaglia 2011). The 1970s and 80s also saw the emergence and strengthening of international insurance groups, which became active proponents of harmonizing insurance practices across countries. Austrian and German insurers, moreover, had recovered much of their prewar capital base, allowing them to play a more prominent role in economic coordination. Illustrative in this regard is the history of Allianz, which pursued relentless international expansion from the 1970s onwards and acquired a prominent role in German corporate governance (Beyer 2003).

The breaking down of barriers between different national insurance industries was by no means a smooth process. Until the late 1990s and early 2000s political negotiations around regulatory harmonization – regulatory differences were regarded as a main impediment to market integration – resembled a "battle of the systems" along the lines of the clash identified by Lengwiler that had existed since the late nineteenth and early twentieth century (Lengwiler 2015): that is a clash between a more interventionist continental approach and a more liberal approach to regulation dominant in the UK (Cousy 2004; Story and Walter 1997). Whilst regulatory harmonization was seen as key to further market integration, attempts to do so remained stuck in the trenches of different approaches to insurance. This only started to change in the late 1990s, when the rise of integrated financial services supervisors, the increased authority of international accounting standards, the emergence of increasingly large international insurance groups and the diffusion of financial expertise in Europe had facilitated the emergence of cross-country coalitions supporting a pan-European regulatory framework based on the principles of modern finance theory (François 2021; Quaglia 2011; van der Heide 2022). The three non-EU countries in our sample (excluding the UK) had already adopted a system of risk-based capital regulation in prior years – Canada in 1987, the US in 1992, and Switzerland in 2009.

Whilst the British, American, Swiss and Canadian insurance industries had already succeeded in gaining a significant share of the welfare pie in the postwar period (although with different levels of success across sectors), lobbying efforts in Germany and Austria seemed to have become more effective in the 1980s and 90s too (Röper 2020). Naczyk and Palier (2014) show for instance for Germany that private finance – and especially insurance companies – have actively lobbied for the privatization of old age insurance, making the case that the creation of large pools of private capital through funded occupational pension schemes would strengthen the competitive position of the domestic financial industry in an increasingly global financial system. One way to do so has been through the advocacy for three-pillared pension systems (Leimgruber 2012), which offered a clear framework for reform and enabled states first to encourage saving for retirement through private accounts by making it attractive for tax purposes and then to cut back on public pension promises (Naczyk and Palier 2014). Insurers, in other words, fostered the (public *and* private) retrenchment zeal of the 80s and 90s in both Maritime and Alpine countries by stepping in as alternative providers of old age economic security. Once privatization takes hold of welfare regimes, it becomes increasingly difficult to halt or even revert the process. Busemeyer and Iversen (2020), for instance, show that the increased availability of private insurance alternatives "undermines support for universalistic public provision of social insurance among the middle and upper income classes" (671).

To substantiate these claims about the association between private insurance and the welfare state we additionally run two regressions: one first-difference OLS regression of the size of private insurance (premiums per GDP) on the size of the welfare state (social expenditure per GDP) in column 1 of Table 3 and a Cox-hazard model on the post-

Table 3 Regressions of insurance on social security (size, timing) and securities market size

	Social expenditure/GDP *First difference OLS*	Social insurance introduction years *Cox proportional hazard model*	Stock market capitalization/GDP *First difference OLS*
Life assets/GDP			0.636 (0.428)
Life assets/GDP*Maritime (ref. Alpine)			1.547*** (0.476)
Life premiums/GDP	0.517*** (0.152)	–1.262** (0.563)	
Life p./GDP*Maritime (ref. Alpine)	–0.493*** (0.170)		
Maritime (ref. Alpine)		–1.734* (0.927)	
Constant	0.164*** (0.021)		0.258 (0.386)
Observations	1,144	337	859
R^2	0.010	0.065	0.112
Adjusted R^2	0.008		0.110
Max. Possible R^2		0.217	
Log Likelihood		–29.980	
F Statistic	5.816*** (df = 2; 1141)		53.980*** (df = 2; 856)
Wald Test		14.780*** (df = 2)	
LR Test		22.620*** (df = 2)	
Score (Logrank) Test		27.360*** (df = 2)	

Note:*$p<0.1$; **$p<0.05$; ***$p<0.01$; social expenditure combines OECD data with Stineman-interpolated data from Lindert (2004); social insurance introduction years are from Schmitt et al. (2015); for insurance and stock market data see appendix.

1880 risk to introduce average social security legislation in column 2. We also add the interaction with Maritime (vs. Alpine) insurance countries, where we include Australia, New Zealand and Italy, respectively, to achieve more statistical power.

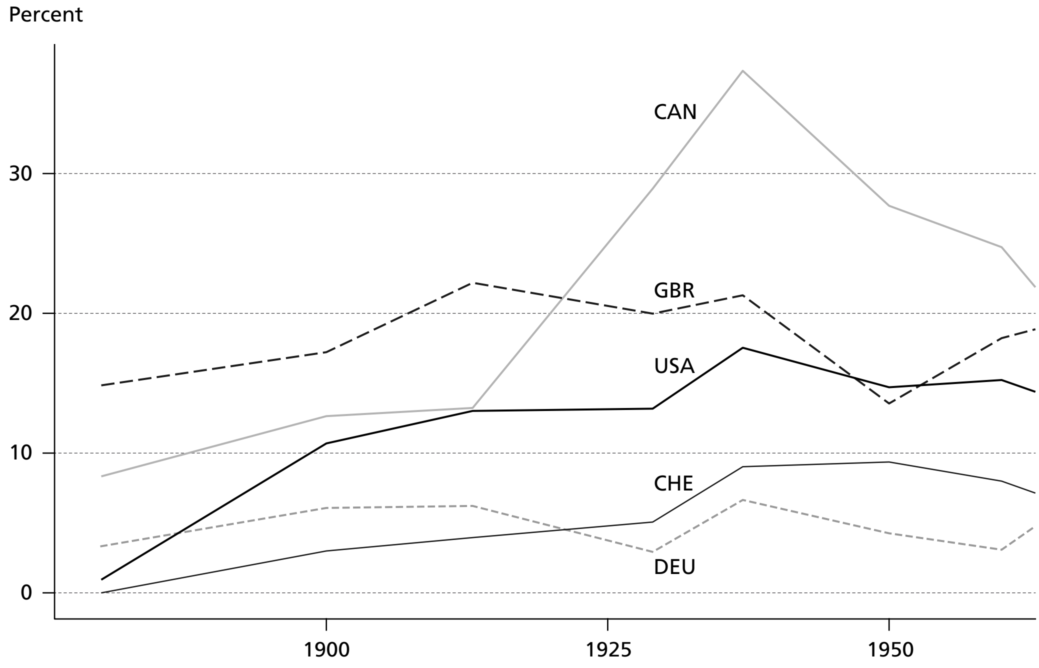
The results confirm that private insurance significantly retards the introduction of social security, significantly more so in interaction with Maritime countries, while leading to competitive growth of welfare states later, but very much dampened and neutralized in Maritime countries. Column 3's first difference OLS, in turn, quantitatively anticipates and supports the claim of the next section: the size of life insurance in terms of its total invested assets is positively associated with stock market capitalization, significantly more so in Maritime countries.

Insurers and financial systems

What lies qualitatively and historically behind this association? In this section, we focus on the interactions between the different varieties of insurance capitalism and the development of financial systems. Here, we argue that private insurance did not just seize the investment opportunities offered by already existing national financial systems; instead, it has been a force to reckon with of its own, competing with banks and other deposit-taking institutions and shaping the direction of financial development by extending securities markets.

First, it should be noted that Maritime insurers have in the past been relatively more successful in attracting capital than their Alpine counterparts. We already noted that private insurance was relatively more sizable in Maritime countries, even when compared against GDP. Figure 8 shows, moreover, that it has also been more sizable relative to the comparatively larger Maritime financial systems, with assets over 15 percent of their country's financial system or double the Alpine shares. This is due mostly to the existence of long-term insurance arrangements – e.g. most life insurance – which function as capital-mobilizing and capital-collecting institutions (Pritchett 1985). Historically, the relative success of Maritime insurers can be explained by the early development of private insurance relative to modern retail banking institutions (Proettel 2017). It is no surprise, therefore, that American insurers, from early on, developed elements in insurance contracts which allowed the insured to draw on their capital when needed, through policy notes, policy loans, surrender values, etc., making insurance suitable as an instrument for saving and investment. In contrast, in continental Europe, insurance contracts mostly served the purpose of protection and were liberalized in favor of saving and investing consumers only much later. Here, social reformers had spread a dense network of mutual, municipal or cooperative savings banks, starting in the late eighteenth century and gaining momentum from then onwards (Wadhwani 2011). Anglophone countries also developed a combination of trustee, mutual and postal savings banks, but on a considerably smaller scale than both their commercial counterparts and

Figure 8 Share of insurance assets in total financial system



Source: Goldsmith (1969), own calculations.

the continental savings banks. In the thinly settled American West, for instance, insurers could grow much more easily through their agency system in contrast to banks, which had to rely on branches and were moreover restricted to state-wide operations. Growing through agents required less overhead, was more flexible and was moreover driven by a stronger insurance desire to diversify risk (Stalson 1969). Oversimplified, the Alpines were overbanked but underinsured, the Maritimes were underbanked but overinsured.

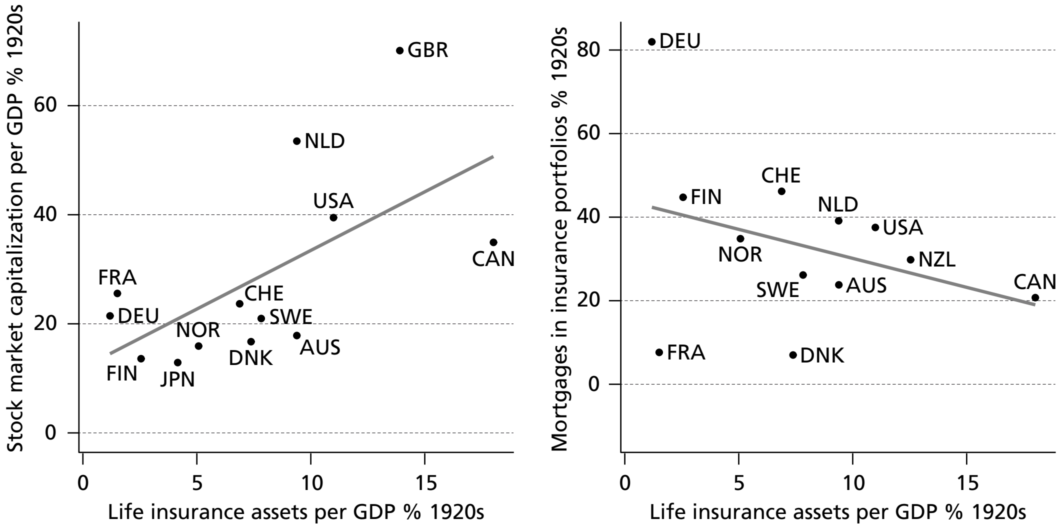
Where insurers competed with banks in deposit collection, they helped to create and complement securities markets from early on. First, the early private insurers in need of large capital reserves were among the first joint-stock companies, listed with trading companies, banks and railroads on early stock exchanges (O'Sullivan 2016, 26). Second, and perhaps more importantly, insurers were among the most important investors in early securities markets, as they could count on a predictable inflow of capital and, through active trading in the range of 1–2 times this capital, guaranteed the necessary liquidity and efficiency of these markets because they often bought countercyclically. As insurers' payouts are independent of financial market risks and insulated from "insurance runs", they are often said to provide a stable source of funding for financial systems (Trichet 2005). Third, through the actuarial profession, insurers were also actively involved in the construction of the knowledge infrastructures that made financial markets legible and actionable for increasingly large funds. In the UK, for instance, the Institute and Faculty of Actuaries constructed and maintained the Actuaries Index of yields on stocks and bonds from 1929, which was later supplanted by the influential FT Actuaries Index first published in 1962 (Haycocks and Plymen 1962; 1954). These indices facilitated the rationalization and professionalization of investment policy, thereby strengthening the legitimacy of market-based finance.

Insurance capital was thus instrumental in the creation of financial markets. In the US, life insurers facilitated the creation of both primary and secondary bond markets between the Civil War and World War I (Pritchett 1985). Investment banks relied on insurers as the most important syndicate members when placing new issues (North 1952). By 1905, securities – mainly railroad, then also industrial, utility and government bonds – made up around 50 percent of insurers' portfolios and 50 percent and more of the total securities market (O'Sullivan 2016, 52). While US life insurers invested in bonds, fire and marine insurers invested predominantly in American stocks with 25–30 percent portfolio share over many decades (Goldsmith 1958, 60). In Canada, it took until the setting up of the first domestic company Canada Life, which unlike existing British and American firms bought domestic debentures and stocks, to create a domestic securities market, based even more on stocks than bonds (Neufeld 1972, 242). This changed with the growth of government debt and the 1929 crash, when the exceptionally large Sun Life held more than 50 percent stocks, with all big companies maintaining large investment departments for active securities trading (Fullerton 1962, 124). British insurers, in turn, have likewise had a long tradition of buying bonds and stocks from the nineteenth century, but the interwar years saw an increased focus towards more stock investment (Scott 2002).

In Alpine countries, by contrast, the large majority of life investments was in direct mortgages or, in Austria, mortgage bonds, a feature that even the two intermezzi of forced war-bond investments did not change (cf. Figure 1). In Switzerland, insurers generally held few bank and mortgage bonds (Gasser and Meyer 1952, 198). The growing protectionism of the insurance industry, particularly in Alpine countries, forcing foreign insurers to buy domestic securities, reveals the importance attributed to insurers for securities markets and capital mobilization (Pearson and Lönnborg 2008). Not surprisingly then, the historical insurance asset size of countries correlates positively with the historic stock market capitalization and negatively with the portfolio shares of direct mortgages (cf. Figure 9).

In postwar Germany and Austria, insurers continued to play a marginal role because much of their capital base had been destroyed by hyperinflation and the destruction of real estate and default on state bonds during the war: while Maritime life assets amounted to 16 percent of GDP by 1914 compared to 11 percent in Alpine countries, the comparison was 17 percent to 4 percent in 1925 and even 24 percent to 8 percent by 1950 (cf. Figure 1). In Germany, the retreat from mortgage investment was relatively slow given the housing reconstruction needs and rather gave way to corporate *loans* with additional securities instead of tradable securities (Kopper 2016). Austrian insurers also rather gave out loans to corporations (Url 2017, 565). Banks remained primordial for corporate finance and underwriting of securities and the government for total invest-

Figure 9 Life insurance assets per GDP and size of securities markets, average 1920s



ment; in the Maritime countries, in contrast, private insurers played a major role in capital formation and securities investments, taking up more than half of all the new security issues offered in the UK and similarly in Canada (Hogan 1964).

Since the 1970s, life assets have experienced an accelerated growth to more than 50 percent of GDP in Maritime and more than 30 percent in Alpine countries in 2015, with an unequivocal trend towards investment in financial securities (see Figure 4). Whilst in Maritime countries, insurers now invest at least 75 percent of their assets in financial securities (with British insurers investing nearly all their assets in financial securities, mostly stocks), in Alpine countries, insurers now also invest most of their assets in financial securities, mostly bonds. The change in the composition of Alpine insurers' investment portfolios was the result of a growing volume of investments in light of pension privatizations and the increased internationalization of the financial system (Kohl 2022). In Germany, for instance, insurers held $125 billion in 1980, an amount that would nearly quadruple in the following decade to $453 billion (Chuhan 1994, 10), which amounted to around a quarter of German GDP in 1990. This amount again doubled to €860 billion (roughly $930 billion) in 2000, making insurers "the most important institutional investors in Germany" (Maurer 2004, 111). Thus, in terms of assets, Alpine insurers – and especially German insurers – grew substantially, becoming increasingly important institutional investors heavily invested in financial assets, mostly in fixed-income but since the beginning of the 2000s also increasingly in equities. These assets were not just invested domestically but also increasingly across borders. The rise of securitization in the 1990s and of a highly internationalized financial system more generally meant that Alpine insurers enjoyed access to a larger pool of investible financial securities, which is reflected in increased investment in financial assets and a rising share of foreign assets. Moreover, the increased internationalization of the banking sector also meant that governments increasingly perceived pension privatization and the concomitant growing capital base of insurance companies and pension funds as an attractive policy option to compensate for the reduced capacity of the domestic banking sector to supply patient capital (Akers and Seymour 2018; Lamping and Rüb 2004).

In the same period, the volume of Maritime insurers' assets continued to grow apace. In the UK, US and to a lesser extent in Canada, insurers were among the most sizable institutional investors, who took up an increasingly important role in corporate governance. In the US, for instance, insurers owned 26.6 percent of $2.09 trillion assets owned by institutional investors in 1981; and in 1990, they owned 29.7 percent of $6.52 trillion (O'Barr, Conley, and Brancato 1992, 28). In the UK, the share of institutional capital managed by insurers was even larger at 46 percent of £600 billion in 1990 and 54 percent of nearly £2 trillion in 2000 (ONS). Whilst in the US, a large share of savings ended up in mutual funds, British insurers managed to strengthen their hold of the savings market by offering investment in the functionally near-equivalent unit-trusts – often managed by the insurers themselves – through their insurance contracts (van der Heide 2020). Insurers, moreover, did not just continue to feed the expansion of Anglo-Saxon capital markets but also had an influence on the kind of instruments that were issued. A good example of this is the index-linked or inflation-linked bond, coupon payments of which are linked to an inflation index. This instrument, which was first issued by the British government in 1981,[5] is favored by insurance companies and pension funds, who may use these "linkers" to "match" their investments with their long-term inflation-linked liabilities (e.g. pension annuities). The government, in return, will likely be able to pay relatively low interest rates as long as they can keep inflation down.

Private insurance thus had – and continues to have – a strong influence on capital market development, both in terms of volumes purchased and traded as well as expertise and instruments. Countries with larger life industries are also home to larger stock markets (Impavido, Musalem, and Tressel 2003). Although Alpine insurers have started to catch up with their Maritime counterparts in terms of size and investment portfolios, differences still remain. Whilst in Maritime countries long-term insurance arrangements are generally seen as vehicles for saving and investment enabling policyholders to "embrace" capital market risk (Baker 2002), the relative emphasis of long-term insurance arrangements in Alpine countries remains on protection, which privileges investment in fixed-income instruments rather than stocks. British insurers, for instance, are free to shift the burden of financial risk to the level of individual policyholders (Rüttler 2006). German life insurers, in contrast, must adopt a state-administered guaranteed interest rate and distribute additional profits directly to policyholders (Naczyk and Hassel 2019). The nature of the insurance arrangements, in other words, continues to affect the functioning of insurers as financial intermediaries channeling savings into capital markets.

5 The pattern of other governments following suit broadly follows our Alpine/Maritime distinction: Australia in 1985, Canada in 1991, Sweden in 1994, the United States in 1997, France in 1998, Italy and Japan in 2003, and Germany in 2006 (OECD).

5 Conclusion

Private insurance is a potent but underappreciated force shaping the various social and economic security arrangements of modern capitalist societies. To make this point, we picked up on the work of Michel Albert, who perceived the existence of two distinct insurance cultures, to develop and substantiate a descriptive typology distinguishing between Alpine and Maritime varieties of insurance capitalism. Within this descriptive typology, the Maritime variety of insurance capitalism is much more oriented towards market competition, relies on a larger share of investments in financial market assets, is more oriented towards saving and investment, and developed much more quickly, especially in the early years. The Alpine variety, in contrast, is characterized by more direct state involvement through state-associated insurance enterprises and tight regulation of competition, direct investments in mortgages and loans to government, a stronger focus on reinsurance, and a more protracted development. Perhaps unsurprisingly, this classification roughly corresponds to the more commonly discussed classifications in CPE of welfare states and financial systems and could geographically even be extended to include other English-speaking countries on the Maritime side and more CMEs on the Alpine one. The main point of this exercise, however, is not just to point to the correspondence between these different classifications but to think through the causal relation between the development of private insurance industries and the broader social and economic security arrangements characterizing contemporary national political economies.

The differential development of private insurance can be explained through Gerschenkronian development theory, with private insurance emerging in early developers as centers of capital accumulation. The differentiated timing and pace of private insurance development across Alpines and Maritimes, we suggest, has in turn played an important role in shaping the welfare arrangements and financial systems of these countries, which insurance largely preceded. The earlier and more fully a private insurance industry developed relative to public welfare institutions and financial institutions, the more likely a country would develop as a liberal welfare state with a market-based financial system and a private insurance sector of the Maritime kind. When private insurance developed more slowly relative to welfare institutions and financial systems, a country is more likely to have developed as a Bismarckian welfare state with a bank-based financial system and a private insurance sector of the Alpine kind. The distinct trajectories of the German and Austrian cases on the one hand and the Swiss case on the other confirms this point: whilst the hyperinflation of the 1930s set the German and Austrian insurance industries backward in their historical development, the Swiss insurance industry, which seemed clearly of a more Alpine kind, continued to grow and successfully pushed for a more privatized welfare regime based on the American model (Leimgruber 2008). Private insurance, in other words, is a crucial link for understanding the association between the development of financial systems and welfare arrangements.

As the development of the Alpine private insurance industry is catching up with its Maritime counterpart, private insurers can well become a force to reckon with in shaping the future of the broader economic and social security arrangements in the Alpines (indeed, they have already been a force to reckon with in the Swiss case). Private insurers can do so by offering private alternatives to public welfare arrangements, by lobbying for the privatization of public welfare arrangements, and by providing the expertise through which many of today's policy choices are understood. From an economic policy perspective, moreover, the nurturing of a large private insurance sector can be seen as a clear path towards enhanced domestic capital market development (Akers and Seymour 2018; Lamping and Rüb 2004). The catching up of the Alpine with the Maritime insurance sector, in other words, makes it more likely that the social and economic security arrangements of these national political economies will (continue to) converge on a liberal welfare model and on market-based finance, both predominantly seen in the Maritimes. Under pressure from common European regulation and financialization (François 2021; Quaglia 2011; van der Heide 2022), signs of convergence on a more Maritime model of insurance have already been visible, with increased financial market investment and a convergence on a risk-based model of regulation aimed at stimulating competition among insurers. To what extent the Alpine countries will truly come to "embrace" risk (Baker 2002) as they do in their Maritime counterparts, however, remains to be seen.

Appendix

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