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Marine insurance in the inter-war years

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Gustav Jakob Petersson, *Insurance and cartels through wars and depressions: Swedish marine insurance and reinsurance between the world wars*, Umeå studies in economic history 44 (Umeå: Department of Economic History, Umeå University 2011). 343 p.

In this doctoral thesis Petersson aims, first, to examine the challenges facing the Swedish marine insurance industry between the world wars and the strategies it adopted; second, to provide an account of a cartel operating in a market divided between stock, mutual and foreign companies; and, third, to analyse the role of marine reinsurance in the period. All three areas have seldom been the subject of scholarly research, so much of the ground, covered here by Petersson with great energy and expertise, is new.

The thesis is organised into ten thematic chapters. It should be noted at the outset that the thesis is rather too long and repetitive. We are given, for instance, repeated definitions of a tariff and of coinsurance, repeated statements that cartels are more likely to be formed in periods of falling prices, and that agency issues were different for stock companies than mutuals. There are certain benefits of length, namely that some issues are covered in adequate detail, but there are also some substantial omissions, noted below.

In chapter one Petersson describes how marine insurance is characterised by a multiplicity of physical hazards. Underwriting risk is determined by the age, construction and mode of propulsion of the ship; the cargo carried; the quality of crew; the risks of different seasons and weather encountered *en route*; the loading facilities at different ports; political risks at sea or in port; and adverse selection and moral hazard problems, particularly when insuring ocean shipping operating over long distances. These create great risk assessment and pricing problems that are especially acute in periods

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of deflation and depression, when there is overcapacity and freight rates, insured values and premium income fall. Potential responses of insurers include raising premium rates, reducing liabilities, cartelisation, or diversification into other insurance lines. Having set up the problem, Petersson lists his research questions. How did Swedish marine insurers cope with these challenges in the inter-war years? What cartel strategies did they adopt? How well did company-specific strategies, notably reinsurance and diversification, compensate for poor results in marine insurance? Swedish marine insurance is justified as a case study because, first, it was largely unaffected by regulatory change in the period (although we are not told why), and, second, because mutual and stock companies co-existed in the market, which allows Petersson to explore the impact of the inter-war challenges on both organisational forms. A range of sources are used, including Swedish official statistics on insurance companies; the minutes of the Swedish Association of Marine Underwriters (*Sjöassuradörernas Förening*); and contemporary publications and monograph histories of individual companies.

One omission becomes immediately obvious: the examination of investments. This is a problem that rather dogs the rest of the thesis. At several points (e.g. pages 22 and 76) Petersson refers to the importance of asset yields for the survival of Swedish marine insurance companies in the 1930s. He mentions the possibility that marine insurers could have mitigated the effect of currency fluctuations through their investment strategies (citing the economist Anders Axvärn; p. 35). Yet the latter are explicitly excluded from the analysis. In particular, an opportunity was missed to compare the investment strategies of stock and mutual companies, and also those of specialist marine companies with companies operating in multiple insurance lines. Perhaps this might be an item on Petersson's future research agenda.

Chapter two provides an overview of pre-war and interwar Swedish marine insurance, shipping and trade. Most Swedish ships were insured and most were insured with Swedish marine insurers. There was a close correlation between shipping, trade and marine insurance across both periods, but premium incomes became more volatile after the First World War.

Chapter three describes the challenges facing marine underwriters after the war: the overcapacity in both shipping and insurance; the decline in freight rates and premium income; the growing burden of administrative costs for insurers; the increasing delays in ship repairs; the increasing losses (including the post-war legacy of unexploded mines); technological change, with the expansion of diesel motor ships and the decline of sail shipping (disproportionately fast in Sweden), that increased uncertainty about safety; the loss of insurance business as Sweden's wartime competitive advantage as a neutral country disappeared; and exchange rate fluctuations that could change the ratio of losses to premium income and expenses if the former were paid in a different currency from the latter.

Chapter four gives a valuable insight into the varied experience of stock, mutual and reinsurance companies during the period. This chapter is best read and discussed in conjunction with chapter eight, which offers a quantitative analysis of marine insurers' operating results. While profits were higher in the 1920s for mutual than stock companies, when the latter were particularly affected by the loss of foreign business, the situation was reversed in the 1930s. Measured by the number of company exits, reinsurance was the most volatile and poorly performing sector. Loss ratios (claims paid as a percentage of premiums earned) rose sharply in the years 1921 to 1926, but thereafter improved through to the late 1930s, with the Great Depression having little visible impact on this trend. Combined ratios (losses plus administrative costs as a percentage of premiums) improved more slowly because of the inflation of salaries and agents' commissions from the mid-1920s. Petersson then (in chapter eight) runs a series of regression models to examine the determinants of annual loss ratios of all Swedish stock and mutual marine insurers in this period. The results show, first, an inverse relation between trade and loss ratios (to be expected); second, an inverse relation between the volatility of exchange rate fluctuations and loss ratios; third, a positive relationship between interest rates and loss ratios, which Petersson explains by the greater propensity for stock companies (but not mutuals) to reduce their premium rates when investment returns were high (thus emphasising the need for the historian to examine investment strategies); fourth, that the combined ratios of both mutuals and stock companies were similar and moved broadly in tandem. Petersson concludes from this interesting analysis that organisational form was of less importance in determining aggregate profitability in marine insurance than two major types of company-specific strategy, namely reinsurance and diversification. These are examined in chapter nine.

Before this, there are three related chapters that discuss the operations and impact of cartels in the marine insurance market. Insurance cartels offer two major advantages to their members: access to reinsurance capacity, and access to information on risks and rates. In chapter five Petersson discusses the different types of tariff pricing in operation in this period: general and specific, cargo and hull. He describes the expansion of the Swedish Association of Marine Underwriters (SAMU) – which comprised 15 companies by 1918 – stimulated by a post-war fear of falling rates and incomes. The SAMU excluded foreign and mutual companies from its membership, and, from 1935, prohibited its members from providing reinsurance to mutuals underwriting marine insurance in Sweden.

Chapter six examines the difficulties faced by the SAMU in implementing its tariffs. Binding hull tariffs were more difficult to enforce than cargo tariffs, which was not surprising given that most hull business was written by mutual companies operating outside the SAMU. Debates over tariff revisions or cancellations were most frequent during the economic upswings of 1919–1920 and 1933–1936, but rare during downturns, especially between 1921–1923. It was particularly difficult to agree on minimum tariffs during periods of falling rates. Petersson also finds, however, contrary to cartel theory, that market division agreements were more difficult to sustain than price agreements. The former failed because of squabbling among members, for example, over the commissions to be paid on quota pool insurance sold to public institutions, and over the definition of a ”public institution” for the purpose of dividing this market. The SAMU suffered from a problem of mixed membership. Its composite members had a comparative advantage over the specialist marine insurers in being able to cross-subsidise their marine losses from profits made in other insurance lines, and offer discounts to policyholders and better terms to agents. The SAMU also found it difficult to enforce tariffs on large buyers of cargo insurance, especially for open policies on multiple shipments. Such policyholders had access to international markets and therefore lots of bargaining power. While foreign companies were unimportant as a percentage of marine insurance sold in Sweden, foreign insurance provision remained a significant force because Swedish shippers could go abroad to obtain cover and because over half of ships sailing to and from Sweden were foreign-owned. Cartel theory suggests that the presence of large shippers able to buy insurance in international markets might have induced cheating or defection among cartel members. In fact, despite these difficulties, the response of SAMU members was not to exit. Petersson explains this by the benefits that the SAMU still offered: its use of reinsurance agreements to keep competition from mutual and foreign insurers in check, and the facility it provided for information sharing about new risks, notably motor-ships.

In the inter-war years the SAMU also engaged increasingly with the major international cartel, the International Union of Marine Insurers (IUMI). This is the subject of chapter seven. Ultimately, the SAMU adopted different cartel strategies from the IUMI, the former having a greater focus on price agreements. The IUMI, being a larger and more diverse cartel, offered more scope for cheating by members. Furthermore, competition from British companies and from Lloyd's, which remained outside the cartel, limited the effectiveness of the IUMI and forced the latter to adopt many of the practices of the UK market.

As indicated above, Petersson explains the survival of Swedish marine insurers, not through their organisational forms or the protection of cartels, but, he argues in chapter nine, through reinsurance and diversification. The latter only applied to stock companies, as no mutual marine insurers moved into non-marine lines in this period. Mutuals, says Petersson, were better able than stock companies to control problems of adverse selection (due to the convergence of interests of policyholders and members) and were in a better position to exclude higher risk customers, advantages that would be reduced if business had been spread over multiple lines. Stock companies, by contrast, diversified rapidly, and this improved their profits in the crises of the early 1920s and the early 1930s. The reliance of Swedish marine insurers on reinsurance also increased during the inter-war years. Rates of reinsurance were very high: an average of 60 per cent of marine premiums were reinsured from 1923, compared to around 50 per cent before 1914. Reinsurance helped smooth income flows and it allowed direct insurers to cede the worst of their business to reinsurers, but this also highlighted asymmetric information problems and reduced confidence between cedants and their reinsurers. For mutual marine insurers it was a different picture: their ceded business produced better returns than the business they retained. Arguably, therefore, too much business was reinsured, especially after 1928, resulting in a decline in the profitability of mutuals. Sweden was a net importer of reinsurance in this period – about 20 per cent of reinsurance purchased came from abroad. About 80 per cent of the domestic supply was provided by stock companies, and, according to Petersson, it was because of its importance to stock companies' income, that reinsurance acted as a stimulus to their cartel cooperation. This is an especially valuable part of the thesis. Little research has been carried out so far on the historical cycles of expansion and contraction of this invisible financial service, and even less on the differing impact of reinsurance on mutuals and stock companies.

In his concluding chapter, Petersson summarises his findings. The challenges arising out of the First World War and the post-war deflation, when returns were falling and market exits rising, catalysed change in Swedish marine insurance and led to a ”new agenda of strategies” and to organisational innovation, not least through cartelisation.

As noted above, this thesis is not without its flaws. Apart from the absence of a sustained discussion of investment strategies, it would have been useful to learn more about some of the leading entrepreneurs in the industry and how they functioned as decision makers and opinion formers – men such as Axel Rinman, the long-serving manager of *Sveriges Allmänna*, the main mover in the SAMU, and the first non-German president of IUMI. In chapter four, Petersson traces some of the interlocking directorates that linked Swedish insurance and reinsurance companies, but this analysis might have been enhanced by a study of company records, particularly those of the *Amphion*, a Gothenburg reinsurer that had the most numerous boardroom connections to Swedish direct insurance companies and was the dominant reinsurer in the Sweden between 1925 and 1935. It seems to have been used as a kind of pool reinsurer for the SAMU cartel. Petersson tells us (p. 111) that it was ”an extreme case”, but otherwise we learn little about it or how it operated. Similarly, we glean from Petersson's data (table 4.3, p. 115) that the Swedish Steam Ship Association was not only the largest mutual in the market, but the largest marine insurance company at all dates between 1913 and 1935, and also that it was one of the earliest to be founded (1872). This leaves the reader wondering how this market structure came about? Did the Swedish Steam Ship Association enjoy first mover advantages, and if so what were these and how was it able to sustain them over a sixty-year period? More generally it would have been useful to have had market shares calculated for many of the tables. Several passages discussed market concentration, but no data were provided to illustrate this.

Nevertheless, it probably indicates the ambitious nature of this thesis that it raises so many unanswered questions. Petersson's work is path-breaking and deserves to be read by anyone interested in the development of modern insurance markets, or the Swedish economy between the wars.