Marine Insurance in Philadelphia during the Quasi-War with France, 1795-1801

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Abstract

Until 1792, marine insurance underwriting in America was carried out entirely by private individuals. By 1810, the business had shifted almost entirely into the hands of joint-stock corporations. This paper investigates this rapid institutional change, focusing on a pivotal period when newly-formed corporations existed side-by-side with private underwriters, and when the risks to American shipping increased substantially as a result of French privateering during the Quasi-War between the US and France. I compare data from a private underwriter and a marine insurance corporation to examine the Quasi-War's effect on insurance rates, the volume of business, and the institutional structure of the marine insurance industry.

1 Introduction

Around 20 June 1797, the prominent Philadelphia merchant George Latimer visited the insurance brokerage of Isaac Wharton & David Lewis, and through them insured goods worth $400 from Philadelphia to Hispaniola (modern-day Haiti) on board the snow *Boston*. A policy was drawn up specifying the details of the risk; the rate of premium was tentatively agreed; and the policy then lay in the broker's office for several days, during which time, other merchants stopped by and, if they considered the premium acceptable, wrote their names on the policy (hence becoming "underwriters") along with the amount of the risk

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they were willing to cover. A typical policy was subscribed by several private underwriters. For the *Boston*'s voyage to Hispaniola, Latimer paid a premium of 15%, reflecting the danger of capture by French privateers then active in the Caribbean.

Other merchants were also shipping goods on the *Boston*. On 26 June, William and Samuel Keith purchased $480 of insurance at 15% on twelve hogsheads of Claret, recently imported from Bordeaux, which they were re-exporting to Port au Prince;[1] and the following day, Boys & McCallmont insured goods worth $800 to Cape Nichola Mole and one other port in Hispaniola, also at 15% (to return $2\frac{1}{2}$% if the risk ended at Cape Nichola Mole). But rather than visiting a broker, these merchants obtained their insurance from a joint-stock marine insurance corporation, the Insurance Company of North America (INA).

At this time, France and Britain were at war. Therefore, as was usual, the assured in all cases warranted that the vessel carried the documents required to establish that the goods were American (neutral) property under US law. Nevertheless, the *Boston* was captured on 25 July by the French privateer *Fine*, and carried into the French port of Jean-Rabel, where she was condemned by a French prize court for going to trade with the English.[2] This was unfortunate, but not unusual; during the late 1790s, hundreds of American merchant vessels suffered similar fates.[3]

By the eighteenth century, insuring through private underwriters was a well-established means of spreading risk employed by merchants throughout the Atlantic trading world. The transactions were usually intermediated by brokers who gathered "names" for each policy. Most of those who underwrote were active or retired merchants. By limiting their exposure on any single risk, and spreading their underwriting judiciously across a variety of voyages, the underwriters attempted to make a profit while minimizing the likelihood of heavy losses. This system of private underwriting ultimately attained its most developed form in Britain, where Lloyd's coffee house in London developed into a sophisticated marine insurance marketplace.

[1] National Archives and Records Administration, Collector of Customs at Philadelphia, Outward foreign entries, E1059B, Box 1689, 13 June 1797; and INA marine blotter, ACE archives.

[2] INA-ACE archive, ledger labeled "French captures", and Bonnel (1961: 325).

[3] The INA paid a total loss on 2 November 1797. Presumably the private underwriters also paid a total loss.

Insurance by corporations was a more recent innovation. The earliest marine insurance corporations had been chartered in Britain in 1720, but they had managed to capture only a small share of the British market, because of a lemons problem which prevented them from competing effectively with the private underwriters at Lloyd's (Kingston 2007b). In the American colonies, a marine insurance industry based on private underwriting had emerged during the mid-eighteenth century (Kingston 2007a). The first American marine insurance corporations were formed in the early 1790s, but in contrast to the British experience, they rapidly took over the market, and the practice of private underwriting died out within little over a decade. This paper investigates the rapid transition between institutional forms: what happened, and why? To investigate these questions, I focus on the pivotal period, in the late 1790s, when private underwriters existed side-by-side with newly-formed marine insurance corporations, and when the risks to American shipping increased substantially as a result of the Quasi-War between America and France. I compare data from a private underwriter and a marine insurance corporation in Philadelphia to examine the Quasi-War's effect on insurance rates and on the pace and direction of institutional change in the American marine insurance industry.

2 Marine insurance in eighteenth-century Philadelphia

Although the basic contractual form of marine insurance policies had become fairly standardized by the eighteenth century, the exact details of particular policies varied considerably. For example, the voyages insured ranged from simple one-way trips between two ports to more complicated voyages to multiple ports. The risks covered also varied from "sea risk" only (dangers of wind and weather) to (more usually) broader coverage including the possibility of enemy capture; and it was common for the parties to add idiosyncratic clauses and conditions to the policy reflecting the nature of the voyage, the information available at the time of contracting, and allowing for flexibility as to route and cargo including adjustments to the premium in various contingencies.

In the early part of the eighteenth century, American merchants generally obtained insurance through their correspondents in London. However, this entailed considerable inconvenience, because of the slow and uncertain speed of communication, and the need to rely on (and pay) their London agents to obtain financially sound underwriters at the lowest possible premiums, and to represent their interests when making claims and settling disputes. Accordingly, as the trade and capital of the colonies grew, an indigenous marine insurance industry emerged. In Philadelphia, an insurance brokerage was operating by the early 1740s,[4] and similar brokerages operated in Boston, New York and elsewhere.[5] Merchants would periodically stop by these brokerages either to insure their own ventures or to underwrite those of others. In one ten-month period in 1756-7, for example, Philadelphia merchant Reese Meredith purchased 37 insurance policies through his nephew Thomas Wharton's brokerage on his own account, and 72 more on behalf of his correspondents in other ports, and he underwrote on 178 policies.[6] Yet, even in Philadelphia (then America's largest port), a broker might sometimes be unable to find a sufficient number of underwriters to cover large policies. In 1787, Philadelphia broker Benjamin Fuller was only able to obtain 34 underwriters on a large policy, "All the underwriters in the City (except 2 or 3) having Subscrib'd", and had to write to New York seeking additional coverage.[7] Philadelphia's merchants also continued to obtain a substantial amount of insurance through their agents in London, particularly on transatlantic voyages.

With Independence, American merchants gained new opportunities for trade with continental Europe and the non-British West Indies (Shepherd and Walton 1976), but their access to the British West Indies was restricted. Further restrictions on trans-Atlantic trade, and a British Order in Council (1783) forbidding the purchase of American-built vessels created a depression in the American shipping industry in the 1780s (Palmer 1981). With the advent of the European war in 1793, however, prospects brightened considerably. Both

[4] William Till to Lawrence Williams, Historical Society of Pennsylvania (HSP) MS 660, 5 August 1743.

[5] On Boston, see Hardy (1901); on New York, see, eg., Gerard Beekman to John Channing, 10 September 1746 (White 1956).

[6] HSP #1735 (Leonard Beale collection), Marine Insurance ledgers. See Kingston (2007a) for a detailed study of Wharton's brokerage business during the French and Indian War.

[7] HSP MS AMB 3485, Benjamin Fuller to Herbert and Potts, 9 August 1787.

Britain and France loosened their mercantilist restrictions on trade with their West Indian colonies, and the French, in particular, began to rely heavily on neutral vessels. American trade boomed.

Independence also freed Americans from Britain's Bubble Act of 1720, which had prevented them from setting up joint-stock corporations for insurance and other purposes. The subsequent chartering of numerous corporations, including banks and insurance companies, was one component of a set of institutional innovations in the early 1790s described by Sylla (2006) as the "U.S. Financial Revolution". The first marine insurance corporation in America, the Insurance Company of North America (INA) was formed in Philadelphia in 1792 and began petitioning the state legislature for a charter. Many of Philadelphia's merchants and private underwriters initially opposed the charter, but when it became clear that the company was operating successfully, the opposition concentrated instead on gaining a charter for a company of their own. Accordingly, in 1794, two corporations were chartered: the INA, and the Insurance Company of the State of Pennsylvania. Many more corporations were formed in Philadelphia and other US cities over the following decade.

3 The Quasi-War between America and France

In the eighteenth century, many private vessels were suitable for conversion to military use; indeed, many merchant vessels were armed as a matter of course. During wartime, it was common for belligerent nations to commission private vessels as privateers to prey on enemy commerce. Privateering provided a free, straightforward and incentive-compatible way for the state to increase its naval strength and harass enemy commerce, and should not be confused with piracy. At least in theory, privateers were subject to strict rules governing the treatment of both enemy and neutral vessels. If the vessels or goods they captured were legally condemned in prize courts, they became property of the captor (sometimes, the state also took a cut of the profits). If, on the other hand, the privateers were unable to show that the vessel or goods were legitimate captures ("good prize"), they were released, sometimes with payment of compensation. In practice, however, nations differed over the conditions governing the neutrality of vessels and cargoes; and inevitably, because a lot of money was at stake, the system was sometimes abused.

Privateering greatly increased the dangers to merchant shipping during wartime. Peacetime rates on one-way voyages from America to either the West Indies to Europe, for example, were usually on the order of $2\frac{1}{2} - 3\%$, with some variations depending on the vessel, captain, time of year, destination, details of the voyage, and so forth;[8] but the risk of capture could drive rates up to 20% or more. Furthermore, news of political developments or enemy naval activity could cause large and sometimes sudden fluctuations in premiums on particular routes.

This created both problems and opportunities for merchants and underwriters. On the one hand, wartime trade could be highly profitable as shortages caused by the interruption of commerce drove up the prices of goods; yet, rapidly changing political and military circumstances, and the slow speed of communication meant that unskilful or unlucky merchants could easily find themselves facing ruin. In seeking to exploit such opportunities, insurance became more necessary than ever. Similarly for underwriters, the high premiums meant that wartime underwriting could be highly profitable if carried out judiciously, but it could also prove disastrous if an unexpected political or military development, such as the capture of a convoy or the seizure of a large number of vessels in port, caused a string of losses.

Britain and France were at war from February 1793 until March 1802. Although the United States remained officially neutral throughout this period, it almost went to war on several occasions. In the Spring of 1794, war with Britain for a time seemed imminent as a result of a British Order in Council, issued on 6 November 1793, which amounted to a total blockade of the French West Indies (to coincide with a military campaign to conquer French colonies). By the time news of the order reached the US, the British had already captured over two hundred American vessels in the Caribbean.[9] The British, however, revoked the Order in January 1794, and in November 1794, the two countries signed a treaty.

[8] See, eg., Levi Hollingsworth's Subscriptions of 1784 in Isaac and Samuel Wharton's insurance office, in HSP MS 1552 Box 8b.

[9] American State Papers: Foreign Relations, No. 86, 25 March 1794 (Vol. 1, p. 428-9).

The objective of Jay's treaty, from the American point of view, was to avoid war with Britain, and to put an end to British captures. In addition, American merchants were granted limited access to the British West Indies. In return, however, Jay (the American negotiator) made several concessions to Britain which were unfavorable to France and which violated the spirit of the Franco-American treaties of 1778 and 1788. The treaty adopted a broad definition of contraband (goods which neutrals could not legally trade with belligerents); accepted the British right to seize non-contraband goods as long as they were paid for; and accepted the "Rule of 1756", whereby neutral vessels could not in wartime enter into a trade which had been closed to them in peacetime. These provisions were injurious to the French, who hoped to use the Americans as neutral carriers to obtain provisions, and to carry on trade with their colonies in the West Indies. Indeed, it was to preserve American neutrality for this purpose that the French had not attempted to enforce the provisions of their earlier treaties, which in theory obligated the Americans to defend French colonies in the West Indies from the British (Allen 1909: 18).

The final implementation of Jay's treaty was delayed until April 1796 by pro-French opposition in the House of Representatives. Once it became known that these efforts to derail the treaty had failed, France retaliated by issuing a series of increasingly restrictive decrees which led to captures of American shipping by French privateers.[10] The first, dated 2 July 1796, was vague as to the terms under which American vessels would be "good prize", but nevertheless served as a pretext for over 300 French captures in less than a year.[11] A second French proclamation on 2 March 1797 stated that American ships without a properly printed *rôle d'équipage* (crew list) would be good prize, a requirement which had no basis in international law, but served as a pretext for further French captures of vessels which had had no warning of the new requirement.[12] A third decree on 18 January 1798 provided that all neutral vessels which carried any item of British manufacture would be good prize (Allen

[10] On the Quasi-War generally, see DeConde (1966), Allen (1909), Clauder (1932), and Phillips and Reede (1936).

[11] American State Papers: Foreign Relations, No. 125, 22 June 1797 (Vol. 2, p. 28-65).

[12] See, for example, the case of the sloop *Townsend*, captured en route to Antigua in 1798 and condemned for lacking a *rôle d'équipage* and invoice of cargo (US Court of Claims, 1908).

1909: 298-9). Since it was virtually impossible to ensure that no item of British manufacture would be found on a ship, this amounted to virtually open season on American shipping. President Adams called it "an unequivocal act of war on the commerce of the nations it attacks."[13]

The tensions with France were exacerbated by the European wars, the distance, and the political instability in France, all of which impeded diplomatic efforts at finding a solution, and by the political chaos in the West Indies, which made it difficult for the French government to control the actions of their agents there. Some of the judges who condemned American vessels in French colonial prize courts were at the same time shareholders in the privateers making the captures. Even a Frenchman described the situation in the West Indies in 1798 as "A system of piracy almost general, sustained by a commercial tribunal which condemns without reserve and without exception neutral and allied ships on the most frivolous pretexts" (Palmer 1981: 78).[14]

Meanwhile, an American diplomatic mission in 1797 not only failed to produce peace, but gave rise to the "XYZ" scandal[15] which moved American opinion sharply in favor of war, so that during 1798, there was constant uncertainty about whether war would be declared. Because war constantly threatened to erupt during this period, but was never officially declared or fully engaged, the conflict "placed the Adams administration and the American people in a state of almost perpetual crisis" (DeConde 1966: 328) and is referred to as a "Quasi-War". The French were unwilling to formally declare war - in fact, ostensibly, France's goal was to force the United States away from an alignment with Britain and back into an alignment with France (though the effect of her actions was exactly the opposite). However, the American administration would have preferred a French declaration of war,

[13] Second Annual message of John Adams, 8 Dec 1798. Accessed via the Avalon project.

[14] American State Papers: Foreign Relations, No. 125, 22 June 1797 (Vol. 2, p. 28-65) contains many detailed accounts of the capture and condemnation of individual vessels and the treatment of their crews.

[15] The French foreign minister, Talleyrand, acting through three agents, refused to meet the American delegation without a £50,000 bribe, a large loan to the French government, and an apology for comments made by President Adams in May. The Americans refused. The delegation's correspondence was published in America in April 1798, with the names of the French agents changed to X, Y and Z, causing a scandal which shifted American public opinion sharply against France.

which would have united America behind the war effort, to an American declaration of war, to which many Americans were opposed.

In the summer of 1798, the US took steps to build an army and navy in preparation for a war. The newly-created American navy captured its first French privateer in July 1798. By winter 1798, the coast of the American mainland had been largely cleared of privateers, and the French had fallen back to the West Indies, where hostilities continued. Most notably, in February 1799, the frigate *Constellation* captured the French frigate *Insurgente*. The war was limited, in the sense that American vessels were not authorized to attack unarmed French vessels or to attack the French on land, but only to attack vessels which posed a threat to American shipping; but already by December 1798, President Adams could claim that "Perhaps no country ever experienced more sudden and remarkable advantages from any measure of policy than we have derived from the arming for our maritime protection and defense."[16] In all, the American navy captured three vessels in 1798, 27 in 1799, and 59 in 1800 (Palmer 1981: 521).

In 1799, France experienced two coups d'état (the second led by Napoleon Bonaparte), and through various channels it became clear that the new French government wanted peace. Accordingly, a second American diplomatic mission left for France in November 1799. After protracted negotiations, a peace agreement (the Mortefontaine Convention) was finally signed on 3 October 1800. Although this agreement was not widely popular, it was very favorable to US shipping: "all the great points concerning navigation are settled to our advantage; they are extremely liberal and contain all we could require" (quoted by DeConde 1966: 288), and pressure from merchants helped to ensure its approval in the senate in February 1801 (DeConde 1966, ch.8).[17]

[16] Second Annual Message of John Adams. Accessed via the Avalon project.

[17] In one respect, however, the treaty appeared unfavorable to American merchants. In exchange for releasing the US from its obligations under the treaties of 1778 and 1788, the US gave up all claims for compensation for the "French spoliations". The merchants (and underwriters) who had suffered these losses argued that by giving up these claims, the US government had, in effect, appropriated their private property for public use without compensation, which was forbidden by the US Constitution. The resulting "spoliation claims" took over a century to resolve (Causten 1871; Allen 1904).

4 Marine Insurance in Philadelphia during the Quasi-War

This paper compares data from two manuscript sources which record marine insurance underwriting in Philadelphia during the Quasi-War: 1,054 policies insured by a private underwriter through the Philadelphia insurance brokerage of Wharton & Lewis, between 13 April 1795 and 30 March 1801, and 8,330 policies insured during the same period by the Insurance Company of North America (INA).[18]

Wharton & Lewis was by far the most established insurance brokerage operating in Philadelphia at this time.[19] In the Wharton & Lewis record, the following information is recorded for each voyage: the date the risk was underwritten; the type of vessel (schooner, brig, ship, etc.); the names of the vessel and of her captain; the origin and destination; the name of the merchant for whose account the insurance was made; the sum insured; the nature of the property insured (goods, vessel, or occasionally, specie); the percentage rate of premium; the total amount of premium; and in most cases, "Fate" (arrived, lost, or taken). The sums insured recorded in this account book do not reflect the total sums assured on these vessels,[20] and some voyages known to be insured through Wharton & Lewis's office do not appear in this record, so the record appears to reflect the underwriting of a single substantial underwriter, most likely the merchant John Savage.[21] Overall, therefore, the

[18] "Account of Policies Underwrote at Wharton & Lewis's Ins^{ce} Office", HSP MS AMB 95591. The INA data is from the Marine Blotters, ACE INA archive, Philadelphia.

[19] Thomas Wharton (1730/1-82) began brokering policies in the 1750s as a sideline to his main business as a merchant (see Thomas Wharton letterbook 1752-59, HSP MS 708A series 3 vol 24. Kingston (2007a) studies the early development of Wharton's business in the 1750s. His younger brother Isaac (1745-1808) joined the business by 1763 (Montgomery 1885 p.20); Isaac's clerk David Lewis (1766-1840) became a partner in the 1780s (Gillingham 1933: 46-7). For Wharton genealogy see Wharton (1880). Regarding David Lewis, see David Lewis papers, Library Company of Philadelphia McA MSS 015.

[20] In December 1795, for example, the prominent Philadelphia merchant Stephen Girard obtained $10,000 insurance through Wharton & Lewis on the ship *Voltaire* from Philadelphia to Hamburg and back (Gillingham 1933: 100). However, the entry in the account book records a sum assured of only $800, at 8% premium.

[21] John Savage is named in Biddle's Philadelphia Directory of 1791 as a grocer located at 326 South Front Street, but by 1794 he had risen to become a merchant and underwriter, and in 1803 he became one of the founders of the Philadelphia Insurance Company (*An Act to Incorporate the Philadelphia Insurance Company*: Early American Imprints, 2nd series, no. 29468). In September 1795, he underwrote £200 on the *Nancy*, which appears in the WL manuscript record for £200 (the policy is in HSP MS 1552, Box 8b, 28 Sept 1795; the total sum assured was £1875; there were 9 underwriters, five of whom subscribed for £200).

Wharton & Lewis register of policies is an incomplete, but substantial record of the most important locus of private underwriting activity in Philadelphia during this period.

About half of the voyages in the Wharton & Lewis record are single or return voyages to or from the West Indies or South America. Another third were (mostly one-way) voyages to or from Europe. The remainder included coastal voyages to other American ports, and voyages to Asia, Africa, New Orleans, and a small number of cross-voyages (voyages between two foreign ports, such as from Europe to the Far East). Most of the voyages either originate or terminate in Philadelphia, but voyages to or from New York and Baltimore are also quite common. Because of the increased uncertainty, insurance on round-trip voyages became less common during the Quasi-War (in 1795, there are more return than one-way voyages to the Caribbean; in 1797, much fewer). There are several idiosyncratic entries, such as insurance on cash carried on board the Crescent, the 32-gun frigate presented by the US government to the Dey of Algiers in 1797 as part of a bribe to stop attacks on US shipping by the Barbary corsairs. In September-October 1797, there is only a single entry: Ship Sickness, Captain Disease, on a voyage from Earth to Heaven with a cargo of 1500 souls - a reference to the outbreak of Yellow Fever during which many Philadelphia residents left the city. The following year, the Wharton & Lewis record is again blank between early August and mid-November for the same reason.

Although the Wharton & Lewis register of policies records the origin and destination for each voyage, there is some residual noise in that some of the policies underwritten may have contained unusual clauses or conditions. For example, on May 26 1797, the schooner *Illinois* was insured at and from Philadelphia to Jeremie, and thence to any other British port in Hispaniola, at a rate of 25%, with $2\frac{1}{2}$% to be returned in case the vessel went only to Jeremie. On August 4th, the policy was amended to the effect that for an additional

The HSP also has a smaller record (MS Am 3680) of 166 policies insured through the brokerage firm of Shoemaker and Berrett between June 1796 and February 1798. The format and handwriting in this record are identical to that of the Wharton & Lewis record, and both arrived at the HSP from the same source, so it would appear that they reflect the underwriting of the same underwriter. Among the subscriptions recorded is $700 on the Snow *Ceres* from Aux Cayes to Philadelphia at $7\frac{1}{2}$% in June 1797. The policy on the *Ceres* is in the ACE INA archive. The total sum assured is $5,000; and the only person who subscribed for $700 was John Savage.

$2\frac{1}{2}\%$, the *Illinois* would be permitted to visit Jeremie a second time on the way back to Philadelphia from Port au Prince (Fowler 1888: 59). The entry in the register of policies reads simply "May 26, schooner *Illinois*, captain Nesbit, Philad-Jeremie &b (ie., &back), (for account of) William Bell, $800 on Vessel and Goods, (rate) 25%, (premium) $200, A (Arrived)". Other entries read, for example, "Jeremie &c", indicating that the policy was for Jeremie but contained additional provisions for travel to other ports.

The INA record is larger and more detailed than the Wharton & Lewis record. In addition to the name of the captain, merchant, and the origin and destination of the vessel, this record has detailed information on the policy conditions, which varied considerably. A typical entry, for example, reads in part "at & from Norfolk to Cape Nichola Mole & at & from thence to Port au Prince, with a convoy, if not, to proceed from the Mole to Jeremie, or a French port in the Bite of Leogane or any other port in the Island of Hispaniola & at & from thence back to Norfolk on the Schooner *Nelly*, James Brown master, Goods, Drs 2500 @ 15pCt whereof if no Loss happens three percent is to be returned if she does not go into the Bite of Leogane or to more than one Port besides Cape Nichola Mole" (policy no. 3818, 9 December 1796).

Most of the policies, particularly on the important routes to the Caribbean, had idiosyncratic policy conditions of this sort. To give just a flavor: Many policies gave the vessel liberty to touch and trade at particular ports, with returns of premium if those ports were not visited. Others granted returns of premium if the vessel sailed in convoy, sailed before a certain date, or was sold at the destination rather than returning to Philadelphia. Most policies included a warranty that the goods insured were American property, but some did not; some of these were declared to be carrying false papers in an effort to pass as neutral. Premiums were considerably higher on vessels which were declared to be carrying contraband - a profitable but hazardous business. Some policies excluded the risk of seizure in port, or of capture by the British, or by the French. If it was uncertain on which vessel goods would be shipped, they might be covered on "any good American vessel" (for a slightly higher premium), possibly with specified returns of premium if it transpired that they had been shipped in particular named vessels. Voyages to Hamburg or Amsterdam usually specified a return of premium if the vessel went "north about" to avoid the English channel. Not infrequently, it was learned that vessels had deviated, or might have deviated, from the specified voyage, for example, by putting into a different port after suffering damage in a storm, and upon receipt of such news the policy was often amended to extend coverage despite the deviation, sometimes with payment of an additional premium. Perhaps the greatest source of variation arose from variations in the time at which the insurance was purchased: vessels could be insured at any time, from before they sailed to when they were expected back. Some were even insured when they were considered overdue; naturally, these paid a higher premium, which might also be affected by rumors about storms, enemy activity, etc.

In many cases, it is clear that the insurers had information of this sort which they took into account when setting the premium, but did not record on the policy.[22] Without knowing all this information, as well as the other unobservable characteristics of the captain, vessel and crew, it is impossible to cleanly compare premia on different voyages, particularly because the Wharton and Lewis record contains only basic information about the route.

Figures 1 to 4 illustrate the rates of premium paid to the private underwriter (WL) and the corporation (INA) for one-way voyages on some of the most important routes during the Quasi-War (roundtrip rates, of course, were even higher). Note that one blotter, covering the period from April 1798 - March 1799, is missing, so there is a gap in the INA data covering this period.[23] The events described in the previous section caused uncertainty which led to sharp fluctuations in insurance rates as rumors of war waxed and waned. The secretary of one of the corporations remarked in 1797 that "Circumstances varying as they do We are obliged to vary premiums very often."[24] There was some trepidation about French intentions

[22]For example, on 9 March 1797, Conyngham and Nesbitt insured the schooner *Pell* at 12% and on the Schooner *Two Cousins* at 5% from Jeremie to Philadelphia (policies 4205/4206). The policy conditions appeared identical, and the record reveals no reason for the difference in premium. On 27 March, however, the second policy was amended, and an additional premium paid, on the basis that the premium on the *Two Cousins* had relied on a report that the vessel had already been sighted having reached the Gulf stream, a report that later proved erroneous.

[23]I have reconstructed some blotter entries from other records (losses), so there are a few INA data points in the figure from the missing blotter.

[24]HSP MS 2001 (Insurance Company of the State of Pennsylvania letterbook), 11 Mar 1797.

Figure 1: Premiums on one-way voyages to or from Hispaniola, 1795-1801. Sources: Marine insurance blotters, ACE-INA archive, and HSP MS AMB 95591.

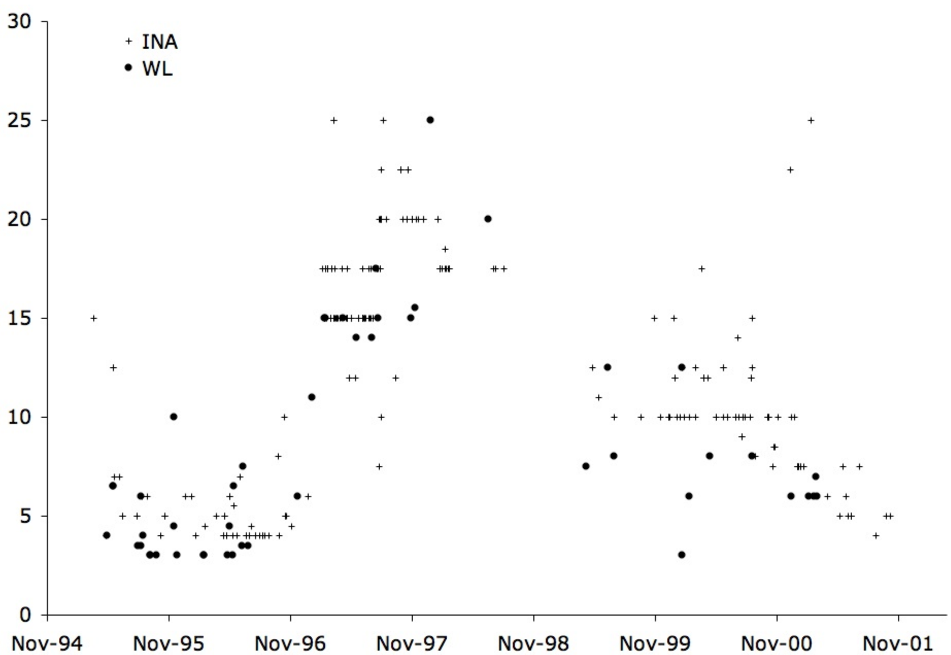

Figure 2: Premiums on one-way voyages to or from Jamaica, 1795-1801. Sources: Marine insurance blotters, ACE-INA archive, and HSP MS AMB 95591.

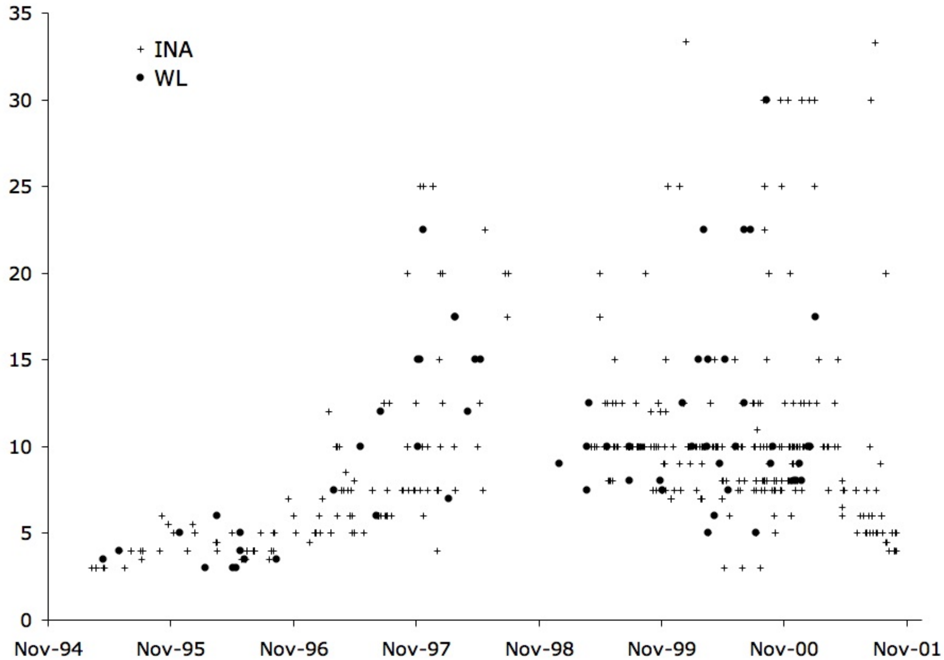

Figure 3: Premiums on one-way voyages to or from Cuba, 1795-1801. Sources: Marine insurance blotters, ACE-INA archive, and HSP MS AMB 95591.

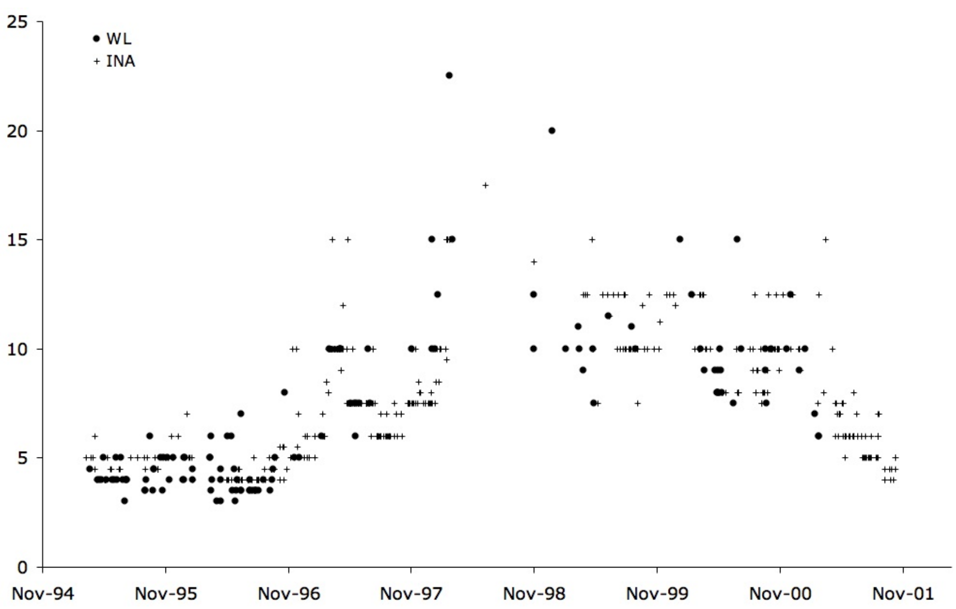

Figure 4: Premiums on one-way voyages to or from Amsterdam, Rotterdam, Bremen and Hamburg, 1795-1801. Sources: Marine insurance blotters, ACE-INA archive, and HSP MS AMB 95591.

as early as October of 1795, when the INA board sent a deputation to the Secretary of State to "inform him that a Report prevails that the French cruisers have orders to Capture all vessels bound to British ports and request him to apply to the French minister to know whether this is so or not".[25] French captures began early in 1796. By late 1796, American newspapers carried lists of captured vessels and the usual rate of premium on a one-way voyage to the West Indies was $5-6\%$, already well above the usual peacetime rate of $2\frac{1}{2}-3\%$. By early 1797, it had risen to 10-15%, and 25% and more was paid in 1798. The figures also reveal considerable variation across ships, depending on the details of the policy, the character of the captain and crew, the sailing qualities of the vessel, the timing of the voyage, and so on.

In 1799, premiums began to come down as a result of the American Naval successes. In June, one merchant ordered insurance from Wharton and Lewis on a voyage from Jamaica to Philadelphia "at as low a premium as possible which I trust will be reasonable as the risk now cannot be great."[26] Rates declined further in 1800-01 as the number of French privateers diminished and the two countries moved toward peace.

Figure 5 compares the volume of business done by the corporation ("INA") and the private underwriter ("WL") from April 1795 - March 1801. This figure reveals a striking shift in business out of the hands of the private underwriters and into those of the corporation beginning in 1796, at around the time that French captures began, and lasting until the threat receded around 1800. Overall, the private underwriter insured 286 voyages in 1796, which collapsed to only 69 in 1798 before recovering to 186 in 1800. The number of vessels entering Philadelphia from foreign ports (which may be taken as a rough indication of the size of the market)[27] also fell somewhat, but only from 817 in 1796 to 487 in 1798, and 565 in 1800.[28] The number of policies insured by the INA, however, actually increased from

[25]Montgomery (1885: 53).

[26]David Lewis papers, Library Company of Philadelphia Collection at HSP, McA MSS 015, Box 1, Folder 8, Woodbury Langdon to Wharton & Lewis, 24 June 1799.

[27]The goods on a single vessel, and the vessel itself, might be covered by several policies; and Philadelphia's underwriters insured both inbound and outbound voyages both to Philadelphia and other American ports, and occasionally, "cross risks" between foreign ports.

[28]Entries: Dun (2006). Similarly, the official value of exports from Pennsylvania fell from a high of about

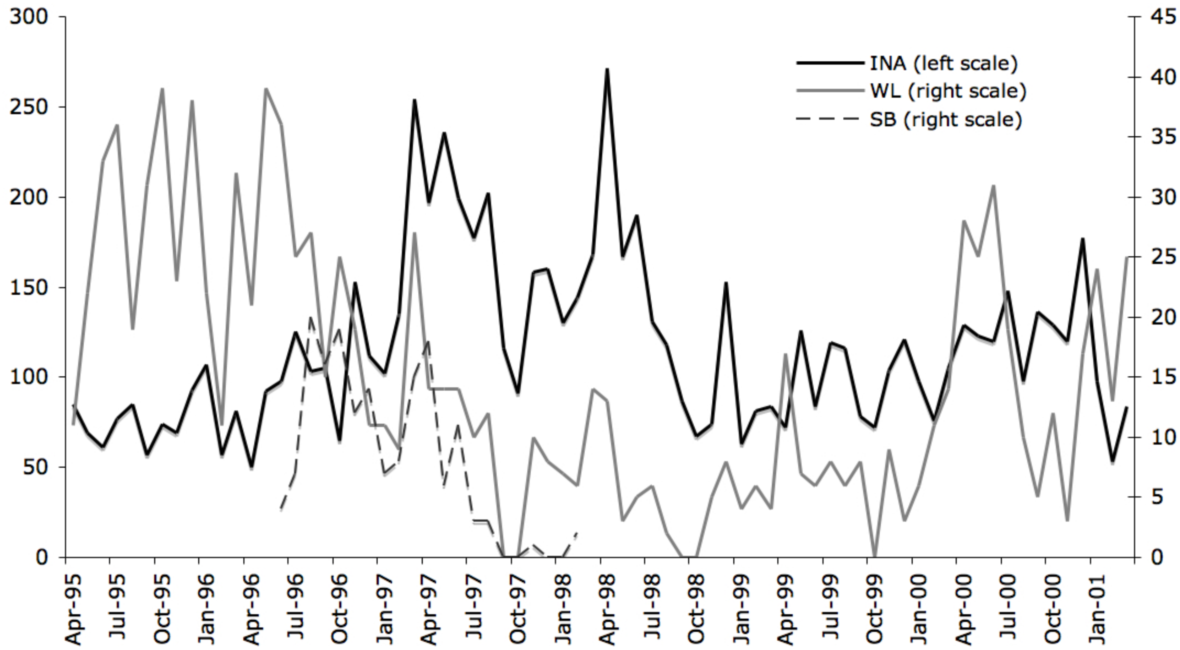

Figure 5: Number of policies by month, April 1795 - March 1801. WL: policies privately underwritten through Wharton & Lewis; SB: policies privately underwritten through the brokerage of Shoemaker and Berrett (see footnote 21); INA: Policies underwritten by the Insurance Company of North America. Sources: WL: HSP MS AMB 95591; SB: HSP MS AM 3680; INA Marine Blotters and (for 1798-9) Journals, ACE INA Archives.

1148 in 1796 to 1547 in 1798, and was 1459 in 1800. Of course, there were many more private underwriters (and one other corporation) in the market, so it is not possible to gauge market share precisely. However, if these data are representative, then it would appear that the Quasi-War coincided with a substantial shift of the marine insurance business out of the hands of private underwriters and into those of the corporations.

The shift of business to the corporations during the Quasi-War is equally evident if we look at total premium revenue (Figure 6). The private underwriter's total premium income fell slightly from $14,642 in 1796 to $13,251 in 1797 (the higher premiums almost compensating for the falling volume of business), and then collapsed to only $7,007 in 1798. In

$17.5 million in October 1795-Sept 1796 to $8.9 million in the year to September 1798, before recovering to $17.4 million in the year to September 1801 (American State Papers: Commerce and Navigation, No.173, 2 March 1812, Vol. 1, p. 926-929).

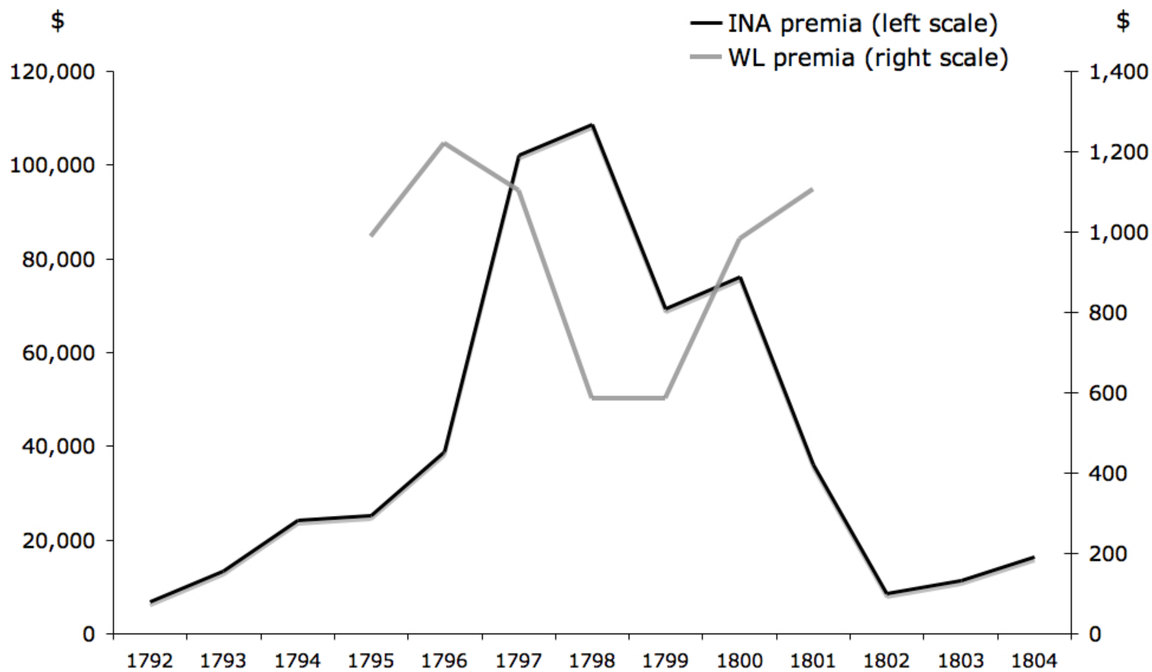

Figure 6: Average monthly premium income, INA (Dec 1792-) and the private underwriter through the brokerage of Wharton & Lewis (April 1795-March 1801). The unit of account in the Wharton & Lewis data changed from Pennsylvania pounds to U.S. dollars in September 1795. Data prior to September 1795 has been converted into dollars at the exchange rate £3 = \$8. The source for the INA data is a notebook in the INA archive.

contrast, the total premiums earned by the INA climbed from \$467,122 in 1796 to \$1,225,790 in 1797 and \$1,304,219 in 1798. As the risks began to fall in 1799 and 1800, the position began to become reversed, but in 1801, the private underwriter's record becomes disjointed - some policies are entered in non-chronological order - and the last entry is at the end of March 1801, suggesting that he may have ceased to underwrite. Some private underwriting continued in Philadelphia for several more years,[29] but by 1803 the dominance of corporate underwriting was assured.

[29] Private underwriting may finally have been effectively killed off by the embargo act of 1807. Philadelphia broker Robert Hobart was still procuring insurance from both private and corporate underwriters in 1804-6 but was facing increasing difficulty due to the growing crisis. New York broker Benjamin Mumford also exited the insurance business at this time (See B Mumford papers, New York State Library and Campbell-Mumford papers, New York Historical Society). In the HSP there is a substantial record of policies insured between 1803-1815 (Ms Am 36802). Most of the policies are underwritten by corporations; but several private brokerage firms appear, becoming progressively less common. The last record of a privately underwritten policy appears in February 1811.

5 Explaining the shift to corporate underwriting

The formation of marine insurance corporations undoubtedly came as a blow to the business of the private insurance brokers.[30] Nevertheless, although they were in competition, the corporations and private brokers also had many interests in common. They formed joint committees to investigate fraud and to communicate with the government about political developments.[31] As the number of captures mounted, they cooperated in attempting to free or obtain compensation for vessels which had been detained by either the English or French, and in obtaining information about the practices prevailing at the prize courts, which might change without warning.[32] Many of the shareholders and directors of the INA also continued both to purchase insurance and to underwrite privately. John Nesbitt, a prominent merchant who was the first president of the INA, occasionally purchased insurance through Wharton & Lewis at least until 1798, as did other INA board members, such as merchant John Leamy.[33] In July 1793, when the board of the INA decided to decline to underwrite a 12-month "time" policy on the brig *Nancy*, several members of the board nevertheless offered to cover the risk privately themselves;[34] and when a question arose as to the proper practice in a case of inadvertent over-insurance, the secretary of the INA naturally turned to Wharton & Lewis, as the most experienced insurers in the city, for their opinion and advice.[35]

[30] As noted above, when it became clear that the INA was likely to obtain a charter, many of those who had initially opposed the INA charter later became involved in forming the rival Insurance Company of the State of Pennsylvania, of which Isaac Wharton was among the approximately 150 founding shareholders (Fowler 1888:50).

[31] Montgomery (1885:54); Insurance Company of the State of Pennsylvania letterbook, HSP Ms 2001, Dec 1795.

[32] This was especially true of the French, of course, but there was also intermittent uncertainty about the intentions of the English. In 1800, for example, the INA complained that "The late Captures made by the British Ships are truly alarming and none more so that those made by the Halifax Squadron, as we cannot discern the principles or pretences on which some of them are made, & of course know not by what precautions to guard against them. They seem to imply some new rule of conduct of which we are uninformed, either of late adoption, or by new construction of former regulations." (INA letterbook, letter to Forsyth Smith &Co., 20 August 1800).

[33] HSP MS AMB 95591.

[34] INA letterbook, ACE INA archives, 22-24 July 1793.

[35] INA letterbook, letter to Stephen Girard, 6 Aug 1794. The INA's office at 107 south Front Street, was just a few doors from Wharton & Lewis's office at 115 south Front Street (Montgomery 1885: 77, 81).

Why Corporations?

What were the advantages and disadvantages of corporations compared to the existing system of private underwriting? In support of their petition for a charter, the INA's founders argued that a corporation could draw on a larger stock of capital than could be accessed through the existing system of private underwriters (whereas under the existing system, "for want of a sufficient number of underwriters of responsibility" large sums of money were "drained from the country" to pay foreign underwriters). Furthermore, a corporation could sue and be sued, making it easier for the assured to recover in case of loss than from many private underwriters individually. Above all, by holding a large, securely invested capital fund it could improve the security of the policy.

It might be (in fact, it was) argued that all of these advantages could equally be provided by an unincorporated company.[36] In particular, a natural progression from the loosely-organized system of private underwriting through brokers was to organize stable syndicates of underwriters in order to eliminate the transactions costs of assembling a new group of underwriters for each policy. This was how the business developed in the French port of Rouen in the 1740s (Miquelon 1978:123-5), and with the development of syndicates at Lloyd's of London in the late nineteenth century; and there had been attempts to organize unincorporated marine insurance companies in America along these lines.[37]

Given the option of forming stable unincorporated syndicates, why did marine insurers instead adopt the corporate form? Limited liability is commonly regarded as a primary motive for incorporation: in comparison with unlimited-liability partnerships, corporations

[36] See "Thoughts on Insurance Corporations, &c." by "An Enemy to Unnecessary Corporations", *United States and Evening Advertiser*, 1 Jan 1794, reproduced in Fowler (1888, p.48-9).

[37] In 1757, six prominent Philadelphia merchants organized a "company", each agreeing to cover a one-sixth share of the risks underwritten by one of them (Thomas Willing) for a period of one year, and not to underwrite separately in their own names (their articles of agreement are reproduced in Gras and Larson 1939: 139-149). Willing & Co. regularly underwrote through Thomas Wharton's brokerage in 1759 (Kingston 2007a), but the syndicate lasted only a few years. In 1783, a group of Boston underwriters formed a similar unincorporated company, in which each agreed to take a one-twentieth share in any policy signed by any three of them (Hardy 1901: 48). Note, however, that the members of these "companies" did not explicitly assume joint liability. It is possible, of course, that the syndicate members made an implicit commitment to cover the deficiencies of others if necessary; but as they were very careful about who they admitted to the syndicate, and the agreements were for a fixed term, this was probably a minor concern.

provide protection for investors with “deep pockets” in case the firm should become insolvent. However, unlimited-liability partnerships had never been observed in British or American marine insurance. Instead, the most salient organizational alternative was private individual underwriting, either through stable syndicates or (more usually) ad-hoc syndicates organized by brokers on a policy-by-policy basis. In either case, there was no joint liability. Each private underwriter was liable only for the amount he had underwritten (or for his share of the syndicate), so the “deep pockets” problem did not arise.

Furthermore, while some corporations obtained charters with clear limited liability provisions, many of the charters were more ambiguous or avoided the question, and in at least one state (Maryland), corporations were chartered with proportional liability (see below). The corporate charter granted to the Insurance Company of North America (INA) in April 1794 was silent on the question of limited liability.[38] However, its founders were keen to limit their liability if possible, and attempted to do so by changing the wording of the policy (Montgomery 1885: 49).[39]

Subsequent corporate charters in Pennsylvania and New York were similarly silent regarding limited liability. In December 1803, the Articles of Association of the Phoenix Insurance Co. made clear the founders' intention that “the members of this association shall not be liable to any loss, damage, or responsibility, in their persons, or property, other than the property which they have respectively invested in the capital and funds of the Company”,[40] but although the charter they obtained two months later adopted most of the provisions of their Articles of Association verbatim, the section on unlimited liability was

[38] INA charter: Early American Imprints (EAI), 2nd series, no. 1112.

[39] The standard form of policy used by private underwriters included the clause “And so we the Assurers are contented and do hereby promise and bind ourselves, each one for his own part, our Heirs Executors and Goods, to the Assured”. A similar clause appears in privately-underwritten policies from Britain and America throughout the eighteenth century (see, eg., HSP collection 1552, box 6/8). At first the INA also used this form, but in May 1794, shortly after incorporation, it changed the wording to “And so we the Assurers are contented, and do hereby bind the Capital Stock, and other common Property of the President and Directors of the Insurance Company of North America to the Assured” (Montgomery 1885: 17, 49-50). This might be read as an attempt to highlight the security of the policy; but it may also be viewed been an attempt to explicitly restrict any claims to the “common property” of the corporations (as opposed to the private property of the shareholders).

[40] Articles of Association: EAI, 2nd series, no. 4867; charter (6 Feb 1804): EAI, 2nd series, no. 50464.

conspicuously omitted.[41] It was not until 1810 that Pennsylvania granted a charter with a clear statement of limited liability.[42]

Massachusetts, Connecticut and Rhode Island all chartered marine insurance corporations with limited liability.[43] In Washington DC, the US senate granted the Columbia General Insurance Company a limited liability charter in February 1803.[44]

In contrast, Maryland explicitly rejected limited liability. The charter of the Maryland Insurance Company, passed on 24 Dec 1795, stipulated

> That if at any time the funds of the corporation should not be competent to pay and satisfy the just demands of the assured, that nothing herein contained shall be construed to discharge the stockholders from being liable for their respective proportions of said losses, according to the number of shares they may hold therein, but no stockholder shall be liable for more than his own proportion of

[41] Again, it is hard to tell whether this was because limited liability was rejected or taken as a given. In any case, the Phoenix adopted a policy wording similar to that of the INA, as did the Union, which was also chartered in 1803. See Phoenix policies in HSP MS 1552 box 8b; Constitution of the Union Insurance Company, July 1803: EAI, 2nd series, no. 5192; policy (25 July 1804) reproduced in Fowler (1888: 70). See also the Philadelphia Insurance Company Articles of Association (1803), which specified limited liability (EAI, 2nd series, no. 4863); and its charter, which was silent on the issue (20 March 1804): EAI, 2nd series, no. 29468). Like the Philadelphia corporations, both the New York Insurance Company and the United Insurance Company (also chartered in 1798 in New York) placed clauses in their policies stating that only the joint-stock property of the company would be liable to pay losses. The New York Insurance Company's Articles of Association (1796) included a clear limited liability provision; but its Act of Incorporation (1798) omitted these sections (Articles of association: EAI, 1st series, no. 30884; charter: EAI, 1st series, no. 34226). See also Goebel (1969: 405-6).

[42] The charter of the United States Insurance Company specified that losses would be paid "out of the joint funds of the company exclusively". Charter: EAI, 2nd series, no. 21871.

[43] See charters of the New Haven (1797), Hartford (1803), Middletown (1803), Norwich (1803) and Union (1805) in Connecticut (1808); for the Connecticut corporations, however, note that only a fraction (from 10% to 40%) of the nominal value of the capital stock was actually to be paid in; the rest was secured by promissory notes from the shareholders, making them in effect liable for further payments on demand up to the nominal value of their shares. For Rhode Island: see charters of the Newport (1799), Providence (1799), Warren (1800), Washington (1800) and Hope (1804), EAI, 1st series, nos. 35970, 36182, 38980, 38344; 2nd series, no. 6494. While the 22 marine insurance corporations chartered in Massachusetts between 1797 and 1805 appeared to limit shareholders' liability (the phrasing varied and was in some cases somewhat ambiguous), they also made the President and Directors jointly and severally liable for all losses incurred on policies underwritten after they knew of losses in excess of the capital stock. Several of these were also authorized to sell fire insurance; and all were authorized to insure lives at sea and against captivity. See charters (1799-1804) in Massachusetts (1805), Vols. 2 and 3. See also Dodd (1954: 225).

[44] Early American imprints online, 2nd series, no. 5201.

losses as aforesaid, or to answer for the failure or deficiency of others.[45]

Since the security of the policy therefore depended upon the solvency of the members, the charter also stipulated that any transfers of shares had to be approved by the directors. An unincorporated association formed in Baltimore in 1799,[46] and two further corporations chartered in January 1805 similarly adopted this proportional liability rule.[47] The Maryland corporations were therefore essentially similar to large syndicates of private underwriters. The difference was mainly in their size, the ease with which shares could be transferred, and the fact that unlike the private underwriters, they raised a common capital fund as an initial bulwark against losses.

In summary, while it appears that the corporations' founders were in general keen to limit their liability if possible, it seems unlikely that limited liability was their primary objective. In all cases, either by the charters, or by clauses inserted in the policies, wealthy shareholders were insulated from joint liability in the event that other shareholders proved insolvent; but this cannot be viewed as the key advantage of incorporation, since there had been no joint liability under the existing system of private underwriting either. This accords with Perkins (1994), who argues that from a *de jure* standpoint, "the historical evidence regarding whether stockholders in the late eighteenth and early nineteenth century had limited or unlimited personal liability for a firm's potential losses is inconclusive" (p.373), but that they probably enjoyed *de facto* limited liability (p.117), which later became formalized as the American common law developed in the early nineteenth century. Given this ambiguity, he argues that in early republic "we may safely conclude that the prospect of limited liability does not appear to have been among the inducements attracting investors to place their funds in the shares of commercial banks and other corporate ventures" (1994: 117).[48]

[45] Laws of Maryland, Session Laws, 1795 (Maryland State Archives online, Vol. 647, p.54).

[46] "Whereas it is contemplated to establish an office or society for insurance, in the City of Baltimore, under the name and stile of the Marine Insurance Office", EAI, 1st series, no. 35147.

[47] Charters of the Marine Insurance Co. and the Union Insurance Co. Laws of Maryland, Session Laws, 1804 (Maryland State Archives online, Vol. 562, pp. 24-26 and 49-51). See also Blandi (1934: 48-50)

[48] Handlin and Handlin (1945) similarly argue that limited liability was not a general feature of early US corporations, or a prime motive for incorporation. Dodd (1954: 370) was unaware of "any substantial evidence on the question whether, at the turn of the century, informed opinion in Massachusetts did or

What, then, were the advantages of the corporate form? The main advantage was probably to reduce the transactions costs of organizing what were, in essence, enormous yet flexible underwriting syndicates, thereby increasing the security of the policy while reducing the transactions costs of spreading the risk more widely, and removing the need to find a new group of underwriters for each policy.[49] In particular, the corporate form expanded the pool of available capital by in effect enabling wealthy individuals unfamiliar with mercantile affairs to act as underwriters by entrusting their underwriting decisions to experts.[50]

Given these advantages, the transition from private to corporate underwriting in America might appear inevitable in retrospect. But the story is not so simple. Recent research challenges the idea that the corporation is a globally optimal form of organization (Guinnane et al. 2007). In particular, in the British marine insurance market, successive waves of marine insurance incorporations failed to overcome the dominance of Lloyd's of London, a marketplace of private individual underwriters (Kingston 2007b).

First, the corporations may also have faced internal agency problems. Hilt (2006) shows that corporations performed significantly worse than unincorporated partnerships at managing complex whaling voyages in the 1830s, and attributes the failure of the corporations to increased agency problems arising from the separation of ownership and control.

Second, the corporations may have been at a disadvantage in overcoming agency problems between the insurer and the insured. As merchants involved in trade, private underwriters had intimate knowledge of the people, vessels and routes they underwrote. They interacted with brokers and with other merchant-underwriters in ongoing, multi-faceted and

did not regard incorporation as implying limitation of liability", and argues that the shareholders' limited liability only became clear through court cases in 1808-9 (1954: 372; see also Hurst 1970:26-8 and Forbes 1986).

[49] In comparison, for example, the syndicate formed by Willing & Co. in 1757 seems quite inflexible despite its small size. The initial agreement was for a fixed period of one year. It was renewed in 1758, with one underwriter being replaced, but does not appear to have been renewed a second time (Gras and Larson 1939: 139-149; Gillingham 1933: 31-3).

[50] Along similar lines, Harris (2005) argues that the corporate form enabled informed insiders to commit not to abuse the rights of less-informed outsiders and thereby attract investment in the East India Company during the seventeenth century. Hilt (2006: 204) similarly argues that corporations' formal governance structure helped to induce small investors with no knowledge of whaling to invest in whaling voyages in the 1830s.

mutually beneficial business and social relationships. Thus, insurance became part of the complex web of trusting personal interactions which characterized business in the eighteenth century (and is hardly irrelevant today), and which may have helped to mitigate agency problems. Further, since insurance could be profitable if judiciously practiced, merchants may have had an incentive to insure the "best" risks privately.[51]

A further important advantage of private underwriters was their leeway to be flexible. Deviations which might have made a policy technically invalid were common and often unavoidable, so some aspects of the contract were therefore necessarily incomplete, and private underwriters may have had an advantage in entering such implicit contracts. In 1806, Robert Hobart, one of the last remaining marine insurance brokers in Philadelphia, informed a correspondent in New York that he had, as requested, effected his insurance wholly through incorporated companies, but added:

> "I can assure you, in regard to solvency, there are not perhaps two [private underwriters] who write that I would hesitate in laying an India risk of my own before: And many persons in this City are giving a preference to Individual Underwriters, from experience that they may meet with a greater spirit of accommodation from them, in case of Loss, than they can always expect from the Directors of an Office, who must consult the Interest of the Stockholders, and may not conceive it consistent with their Duty to be liberal."[52]

Effect of the Quasi-War

It remains to explain why the Quasi-War shifted the advantage so sharply in favor of corporations. War could be highly profitable for underwriters, and just as the Napoleonic wars led to boom years in marine insurance in Britain (Kingston 2007b), the Quasi-War created tremendous profit opportunities for Philadelphia's underwriters. Figures 5 and 6 suggest that

[51]Because of the small scale of the market, and because many of those involved in corporations were leading merchants, the American corporations' disadvantage was likely much less severe than the lemons problem that inhibited the growth of British marine insurance corporations (Kingston 2007b).

[52]Robert Hobart to Benjamin Mumford, 23 January 1806, Campbell-Mumford papers, NYHS.

the corporations were far more successful than private underwriters in taking advantage of these opportunities. Why?

First, the financial security of the private underwriters who insured their ventures was always a concern for merchants; private underwriters might abscond, die, or go bankrupt before a claim could be paid. But the security of the privately-subscribed policy, always somewhat suspect, became more so in wartime. Most private underwriters were merchants, and while war provided many opportunities for gain, it also increased the probability of bankruptcy if the merchants' ventures were unsuccessful. The Oliver brothers, merchants in Baltimore, warned in May 1799 that "The Times are so critical that there is but little security in any foreign expedition and we don't feel anxious to engage in them"; but others were less cautious, leading to numerous failues early in 1800 (Bruchey 1956: 193, 201-2). Thus, one merchant advised his correspondent that although the private underwriters were slightly cheaper, he should insure through a corporation:

> "Both the Insurance Offices are good; in this case we would prefer either. It being of a long duration before the Voyage is completed, *Deaths* and other *accidents* may (and does too often) happen to Individuals."[53]

Of course, merchants preferred sound underwriters at any time. The argument here is simply that this advantage of corporations was heightened during wartime, as there was both a greater probability of underwriters' bankruptcy, and a greater probability that the merchant would have to make a claim.

Second, although private underwriters might obtain a high expected return during wartime (if they underwrote judiciously), this came at the cost of a higher variance in their overall return. An unexpected political or military development, such as a change of policy regarding neutral rights, or the capture of a convoy of merchantmen, might cause multiple claims which could bankrupt even a careful underwriter. This probably encouraged them to become more cautious in their underwriting. In April 1797, one merchant wrote that "The underwriters that are substantial will not take a risk to the West Indies and back under $33\frac{1}{2}$

[53] David and Philip Grim to Watson and Paul, 4 February 1799, quoted by Wright (2005: 97).

to 40% against all risks. I say substantial because many of our underwriters circumstances are such [that they are experiencing financial difficulties]".[54] Of course, corporations also faced these dangers; but because their underwriting was backed by a large capital fund, corporations would be better able to weather a run of bad luck, and because their investors could diversify their assets in other ways, a corporation could afford to be less risk-averse than individual underwriters.

Third, war may have shifted the advantage in evaluating risks from private underwriters to corporations. Private underwriters, many of whom were merchants actively involved in trade, may have tended to insure those voyages for which they were familiar with the captains, cargoes, vessels and routes involved. War, however, reduced the relative value of this idiosyncratic knowledge about individual risks, overwhelming it with systematic risks which affected all vessels relatively more equally, while fluctuating frequently as a result of political developments. In processing the kind of information needed to evaluate these systematic risks, the corporations may have had an advantage, as they could afford to pay correspondents to send them information, and subscribed to newspapers from different cities. For example, the Insurance Company of the State of Pennsylvania maintained a correspondence with Hercules Courtenay, the secretary of the Maryland Insurance Company in Baltimore,[55] in which they exchanged information on current rates of premium and discussed political developments. On 5 April 1797, they informed him that

> "The danger you appear to apprehend of a general sweep of all our Vessels by the French in their ports, is also seriously apprehended by us. And in consequence of this apprehension we think it worth nearly if not quite as much to write to French ports as English ... I subjoin a list of Premiums as they at present prevail with us."[56]

The first of these arguments suggest that, while the actuarially fair rates of premium

[54] David Spears, quoted by Ruwell (1993: 89).

[55] The Maryland Insurance Company had its own correspondents who were paid to send it regular marine intelligence; in 1795 and 1796 it paid $100 to William Baker of Fort Point for this purpose (Maryland Historical Society, MS Items Q9700000007413-5).

[56] HSP MS 2001, Insurance Company of the State of Pennsylvania letterbook, 5 April 1797.

ought to increase on all voyages during the war, there would be an additional comparative increase in demand for insurance by corporations at the expense of private underwriters. Ceteris paribus, this ought to increase the premiums that corporations could charge, and force the private underwriters to lower their premiums to maintain their business.

However, the second and third arguments imply that the private underwriters could not afford to compete too aggressively on price. Most private underwriters were themselves merchants, who participated in marine underwriting as a profitable sideline to their main business. To cut their premium rates would reduce these profits and increase the probability of ruin during already perilous times. Indeed, if they were thought to be underwriting too recklessly, they might risk lowering their perceived financial security and creditworthiness. Furthermore, the inflated war risks exposed them to a level of danger that they were not subject to in peacetime. To preserve both their capital and their good name, they had incentives to be prudent in their underwriting. But such a cautious approach would reduce the supply of private underwriting services, and increase the premium needed to induce them to underwrite.

To evaluate these arguments, it is helpful to compare the rates of premium charged by the INA and the private underwriter changed during the Quasi-War (Table 1).

Table 1 shows that before the start of the Quasi-War (1795-6), the private underwriter (WL) was cheaper than the corporation on all routes. By 1797-8, however, during the height of the war, the private underwriter had become more expensive on all routes, and his volume of business had plummeted (recall Figure 5). This is consistent with the possibility that a reduction in both supply of and demand for private underwriting drastically reduced the quantity of insurance transacted while increasing the premium. For the corporation, in contrast, the upward shift in supply (above the "fair" rate of premium), if any, would be lower because of the corporations' relative risk neutrality; while the increase in demand led to a tremendous growth in the volume of business.

A caveat is in order here: the above relies on an implicit assumption that the types of voyages insured by the corporation and the private underwriter are similar - ie., that

Table 1: Average (one-way) premium rates and volume of business on major routes

	4/1795-3/1796		4/1796-3/1797		4/1797-3/1798		4/1799-3/1800		4/1800-3/1801	
	INA	WL	INA	WL	INA	WL	INA	WL	INA	WL
Asia	7.5 (2)	7.43 (7)	10.21 (11)	7.83 (9)	11.12 (48)	14.27 (9)	13.3 (25)	12.5 (1)	12.06 (9)	13.21 (7)
Eur	4.95 (51)	4.46 (42)	5.21 (84)	4.43 (36)	8.57 (143)	9.75 (16)	10.98 (55)	10.75 (10)	9.54 (64)	9.06 (24)
UK	4.81 (16)	4.04 (14)	5.11 (56)	5.00 (11)	10.25 (64)	11.25 (2)	10.57 (61)	11.33 (6)	8.38 (33)	7.48 (21)
HJC	6.36 (113)	4.55 (48)	7.70 (298)	8.16 (53)	12.74 (484)	14.72 (32)	10.53 (243)	9.67 (27)	10.55 (422)	10.93 (52)
Pols	915	317	1394	265	1978	109	1171	95	1415	212

Notes: The first number in each cell is the average rate of premium, in % on one-way voyages (in either direction) between the corresponding destination and ports in the eastern U.S. (mostly Philadelphia) during the specified period. The number in parentheses is the corresponding number of policies. Asia includes Canton, Batavia, Calcutta, etc. Eur (Northern Europe & the Baltic) includes Bremen, Hamburg, Amsterdam, Rotterdam, St. Petersburg. UK includes ports in Great Britain and Ireland. HJC includes ports on the islands of Hispaniola (St. Domingo), Jamaica and Cuba. Pols is the total number of policies (including roundtrip voyages and other destinations) underwritten by the INA and the private underwriter (WL) respectively during each period. Note that April 1798-March 1799 is omitted, as this corresponds to the time period covered in the missing INA blotter.

there is no selection bias; but this assumption is problematic at best. One might reasonably hypothesize, for example, that during the war the private merchant-underwriters could be induced to cover only the "best" risks, leaving "regular" risks to the corporations. A clean econometric comparison of the premiums is hampered both by the possibility of such unobserved selection bias, and by the profusion of idiosyncratic policy conditions which might introduce substantial and possibly systematic unobserved variation in the characteristics of the risks.[57]

[Apologies to those at George Mason: I hope to attempt a formal econometric comparison of the premium rates between the private underwriter and corporation, but have not done so as yet. I think the table probably tells the story better in any case.]

To sum up, the price and quantity data are consistent with the interpretation that a fall in both the demand for and supply of private underwriting led the private underwriters' share of the market to collapse and their premiums to increase above those of the corporations during the war. Thus, the Quasi-War with France created an extraordinarily favorable climate for corporate underwriters which led merchants to favor them over private underwriters, and helped them to virtually take over the market during the war. I will touch on the possible long-term consequences of this temporary shift in the conclusion. Before doing so, however, three other developments are worthy of mention.

First, as discussed above, the success of the two pioneering corporations in Philadelphia led within a few years to similar incorporations in other American cities. This may help to account for the decline in business experienced by the INA even as the volume of trade grew after the end of the Quasi-War (Figure 5), although further market entry in Philadelphia came a little later with the chartering of four new corporations in February-March 1804

[57]Another way to compare the premia charged by the corporate and private underwriters is to compare the premiums they charged on the same voyages. It frequently happened that several merchants separately insured goods carried on the same vessel, or that a single merchant insured large consignments of goods with multiple policies. 246 of the voyages which appear in the Wharton & Lewis record were also insured at around the same time by the INA. In most of these cases, the premium charged is the same; the occasional small differences do not appear to be systematic, and may be largely due to the arrival of new information between the signing of the policies, or to idiosyncratic and unobservable differences in the terms and conditions on particular policies; or simply to the bargaining skill of different merchants.

(Fowler 1888: 69).

Second, as a result of both the increased capacity of the American marine insurance industry, and the intermittent political problems and uncertainties between the United States and Britain, the volume of American business insured in London fell sharply; one American merchant in London argued that the increased security afforded by corporations in America had led to a sharp decrease in the amount of insurance done in London by American merchants, so that by 1810, "nineteen twentieths" of his consignments from America were insured in America.[58] In particular, American underwriters also generally had better and more recent information about the important West Indian routes, and this advantage became particularly important in wartime, when premiums could fluctuate rapidly.[59]

Finally, the yellow fever outbreaks clearly affected the business of the private underwriters. 1797 was not the first time this had happened: in September 1793, Wharton & Lewis had to turn down requests for insurance, "having been forced several weeks past to shut up our Office and leave the City, by reason of the Malignant Fever, which rages there".[60] During the yellow fever outbreaks in 1797 and 1798, both the INA offices and Wharton & Lewis's office were temporarily moved,[61] but because many of the private underwriters had fled to the countryside, it seems likely that the private underwriters' business was more severely disrupted than that of the corporation. This disruption of private underwriting networks likely reinforced the effect of the Quasi-War in hastening the demise of private underwriting.

6 Conclusion

Recent theories of institutional change have emphasized the role of learning. According to North (2005), economic actors build "mental models" in their efforts to understand their environment, and their efforts to innovate and create new institutions are based on these

[58] Select Committee on Marine Insurance (1810), evidence of S. Williams.

[59] Kingston (2007a) argues that the rapid growth of Philadelphia's marine insurance industry (based on private underwriting) in the late 1750s was partly driven by the disruption of regular channels of communication with London during the Seven Years' War.

[60] David Lewis papers, Library Company of Philadelphia Collection at HSP, McA MSS 015, Box 1, Folder 10, Tatnall and Lea to Wharton & Lewis, 20 Sept 1793, and reply of Oct 8.

[61] Montgomery (1885: 83); Fowler (1888: 60)

perceptions; historical experiences may affect actors' perceptions of the available institutional choice set and of the likely consequences of adopting particular rules.

The Quasi-War with France arrived at a critical juncture for American marine insurance, highlighting the advantages of a particular institutional form (the joint-stock marine insurance corporation) and thereby accelerating the process of institutional change. The corporate form increased the security of the policy, reduced the transactions costs of spreading risk, and expanded the pool of available capital. The Quasi-War amplified these advantages by reducing the security of the privately-underwritten policy, and by shifting the advantage in evaluating risks in favor of the corporations.

Although Britain and France experienced a brief peace in 1802-3, it must have been clear at the end of the Quasi-War that a period of considerable uncertainty lay ahead. Peace with France, and Jefferson's election in 1800, created the prospect of renewed tensions with Britain (later manifested in the Embargo Act of 1807 and ultimately the War of 1812). In this context, it seems likely that by bringing the advantages of the corporate form into sharp focus, the Quasi-War encouraged Wharton & Lewis to adopt the corporate form of organization. They were still brokering policies in 1802 (Gillingham 1933: 47), but in 1803, they reconstituted their business as the Phoenix Insurance company, which obtained a corporate charter in February 1804 with Wharton as its first president and Lewis as vice-president, and a capital stock of $600,000.[62] Thus, the exogenous shock of the Quasi-War likely served as a learning experience which accelerated the transition from private to corporate underwriting in the American marine insurance industry.

[62] An Act to Incorporate the Phoenix Insurance Company of Philadelphia, Early American Imprints, 2nd series, no. 50464. Lewis became president following Wharton's retirement in 1805 (David Lewis papers, LCP Collection at HSP, McA MSS 015, Box 3, Folder 102).

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