## *Online Appendix*

## Supplementary Table 1

## Insured voyages through Henriquez (1562–1563)

|  |  |  |  |
| --- | --- | --- | --- |
| Geographic Area | Number of Policies | Total Insured Value in £ gr. Fl. | Mean Insured Value in £ gr. Fl. |
| **Atlantic Ocean and North Sea** | **870** | **303,824** | **349** |
| Amsterdam - Bordeaux | 23 | 10,686 | 465 |
| Amsterdam - Dieppe | 3 | 1,855 | 618 |
| Amsterdam - Lisbon | 19 | 8,716 | 459 |
| Amsterdam - London | 1 | 30 | 30 |
| Amsterdam - Saltes | 3 | 967 | 322 |
| Antwerp - Ayamonte | 1 | 1,085 | 1,085 |
| Antwerp - Bilbao | 2 | 230 | 115 |
| Antwerp - Bay of Biscay | 80 | 16,866 | 211 |
| Antwerp - Bordeaux | 233 | 112,240 | 482 |
| Antwerp - Brest | 3 | 1,020 | 340 |
| Antwerp - Bretagne | 3 | 678 | 226 |
| Antwerp - Bristol | 8 | 2,282 | 285 |
| Antwerp - Caen | 1 | 300 | 300 |
| Antwerp - Cognac | 1 | 240 | 240 |
| Antwerp - Darthmouth | 1 | 127 | 127 |
| Antwerp - Dieppe | 13 | 2,355 | 181 |
| Antwerp - El Condado | 6 | 2,553 | 426 |
| Antwerp - Galicia | 1 | 150 | 150 |
| Antwerp - La Coruna | 1 | 513 | 513 |
| Antwerp - La Costa | 3 | 1,967 | 656 |
| Antwerp - La Rochelle | 6 | 1,370 | 228 |
| Antwerp - Le Havre | 11 | 4,477 | 407 |
| Antwerp - Lisbon | 149 | 58,280 | 391 |
| Antwerp - London | 23 | 3,402 | 148 |
| Antwerp - Nantes | 22 | 6,075 | 276 |
| Antwerp - Oporto | 10 | 901 | 90 |
| Antwerp - Penmarch | 1 | 183 | 183 |
| Antwerp - Plymouth | 1 | 280 | 280 |
| Antwerp - Roscof | 1 | 133 | 133 |
| Antwerp - Rouen | 26 | 6,200 | 238 |
| Antwerp - Saint-Valery | 6 | 1,877 | 313 |
| Antwerp - Saint-Malo | 20 | 3,983 | 199 |
| Antwerp - San Sebastian | 12 | 1,966 | 164 |
| Antwerp - Villa Nueva | 1 | 100 | 100 |
| Arnemuiden - Santander | 1 | 250 | 250 |
| Bergen-op-Zoom - Londen | 1 | 1,050 | 1,050 |
| Boulogne - Bordeaux | 1 | 225 | 225 |
| Bretagne - Bordeaux | 1 | 157 | 157 |
| Bristol - San Sebastian | 2 | 720 | 360 |
| Bruges - England | 4 | 355 | 89 |
| Bruges - La Costa | 1 | 2,053 | 2,053 |
| Bruges - Le Havre | 2 | 1,367 | 683 |
| Bruges - San Sebastian | 7 | 2,128 | 304 |
| Calais - Bordeaux | 9 | 1,609 | 179 |
| Calais - La Rochelle | 1 | 100 | 100 |
| Dieppe - Brest | 2 | 150 | 75 |
| Dieppe - Ierland | 1 | 400 | 400 |
| Dieppe - Saint-Malo | 2 | 190 | 95 |
| Dordrecht - Bordeaux | 3 | 300 | 100 |
| Dordrecht - Newcastle | 1 | 300 | 300 |
| Duinkerken - Bordeaux | 3 | 750 | 250 |
| Duinkerken - Rouen | 1 | 400 | 400 |
| Emden - Bordeaux | 2 | 904 | 452 |
| Enkhuizen - Bordeaux | 2 | 267 | 133 |
| Fecamp - Bordeaux | 1 | 500 | 500 |
| Galicia - Antwerp | 4 | 1,082 | 270 |
| La Coruna - Antwerp | 1 | 17 | 17 |
| La Rochelle - Antwerp | 4 | 700 | 175 |
| La Rochelle - Bordeaux | 1 | 67 | 67 |
| La Rochelle - Zeeland | 2 | 200 | 100 |
| London - Bordeaux | 22 | 9,937 | 452 |
| London - Ierland | 1 | 100 | 100 |
| London - Nantes | 1 | 200 | 200 |
| London - Rouen | 5 | 2,533 | 507 |
| Middelburg - Bordeaux | 3 | 808 | 269 |
| Middelburg - Bretagne | 1 | 150 | 150 |
| Middelburg - La Rochelle | 3 | 380 | 127 |
| Middelburg - Rouen | 1 | 50 | 50 |
| Nantes - Bay of Biscay | 1 | 347 | 347 |
| Nieuwpoort - Dieppe | 1 | 300 | 300 |
| Oostende - Nantes | 1 | 300 | 300 |
| Rouen - Bordeaux | 5 | 1,719 | 344 |
| Rouen - Bretagne | 3 | 694 | 231 |
| Saint-Valery - Bordeaux | 3 | 445 | 148 |
| Saint - Malo - Faro | 1 | 320 | 320 |
| Sluis - Londen | 1 | 70 | 70 |
| Texel - Bordeaux | 2 | 425 | 213 |
| Vlissingen - Biskaje | 1 | 400 | 400 |
| Vlissingen - Bordeaux | 1 | 40 | 40 |
| Vlissingen - Bretagne | 2 | 225 | 113 |
| Vlissingen - Conquet | 1 | 100 | 100 |
| Vlissingen - Landernaux | 2 | 250 | 125 |
| Vlissingen - Nantes | 4 | 679 | 204 |
| Vlissingen - Newcastle | 1 | 100 | 100 |
| Vlissingen - Saint-Malo | 1 | 72 | 72 |
| Zeeland - Bilbao | 4 | 1,047 | 262 |
| Zeeland - Bordeaux | 18 | 6,331 | 352 |
| Zeeland - Calais | 1 | 100 | 100 |
| Zeeland - Charente | 2 | 1,100 | 550 |
| Zeeland - Cognac | 1 | 300 | 300 |
| Zeeland - Dieppe | 2 | 400 | 200 |
| Zeeland - La Costa (Bilbao) | 2 | 385 | 193 |
| Zeeland - La Rochelle | 8 | 1,244 | 156 |
| Zeeland - Laredo | 1 | 50 | 50 |
| Zeeland - Le Havre | 2 | 700 | 350 |
| Zeeland - Lissabon | 1 | 340 | 340 |
| Zeeland - Rouen | 4 | 1,098 | 275 |
| Zeeland - San Sebastian | 1 | 83 | 83 |
| **Atlantic Ocean and North Sea–Mediterranean** | **387** | **141,279** | **365** |
| Amsterdam - Livorno | 1 | 361 | 361 |
| Amsterdam - Mazarron | 1 | 750 | 750 |
| Amsterdam - Sevilla | 2 | 707 | 353 |
| Amsterdam - Tavira | 5 | 1,240 | 248 |
| Antwerp - Cadiz | 37 | 8,287 | 224 |
| Antwerp - Civitavecchia | 6 | 3,309 | 551 |
| Antwerp - Denia | 3 | 860 | 287 |
| Antwerp - Gibraltar | 2 | 413 | 207 |
| Antwerp - Livorno | 27 | 7,398 | 274 |
| Antwerp - Malaga | 25 | 10,525 | 421 |
| Antwerp - Marseille | 17 | 3,271 | 192 |
| Antwerp - Mazarron | 29 | 1,7938 | 619 |
| Antwerp - Napels | 1 | 200 | 200 |
| Antwerp - Sanlucar | 8 | 1,131 | 141 |
| Antwerp - Sevilla | 160 | 60,536 | 378 |
| Antwerp - Tavira | 19 | 5,624 | 296 |
| Antwerp - Valencia | 11 | 2,810 | 255 |
| Arnemuiden - Sanlucar | 1 | 200 | 200 |
| Brest - Livorno | 1 | 200 | 200 |
| Brugge - Sevilla | 2 | 1,500 | 750 |
| Dieppe - Cadiz | 1 | 250 | 250 |
| Dieppe - Marseille | 1 | 300 | 300 |
| Emden - Cadiz | 3 | 1,600 | 533 |
| Lisbon - Civitavecchia | 1 | 83 | 83 |
| Lisbon - Livorno | 2 | 667 | 333 |
| London - Livorno | 2 | 244 | 122 |
| London - Malaga | 1 | 70 | 70 |
| London - Puerto Santa Maria | 1 | 450 | 450 |
| Nantes - Sevilla | 3 | 3,230 | 1,077 |
| Orna - Malaga | 1 | 50 | 50 |
| Rouen - Livorno | 1 | 200 | 200 |
| Rouen - Sevilla | 1 | 3,900 | 3,900 |
| Sandwich - Sevilla | 1 | 250 | 250 |
| Sluis - Malaga | 1 | 133 | 133 |
| Southampton - Livorno | 1 | 600 | 600 |
| Tavira - Sevilla | 1 | 17 | 17 |
| Texel - Malaga | 2 | 458 | 229 |
| Villa Nova - Livorno | 2 | 833 | 417 |
| Zeeland - Cadiz | 1 | 115 | 115 |
| Zeeland - Livorno | 1 | 320 | 320 |
| Zeeland - Sevilla | 1 | 294 | 294 |
| **Atlantic Ocean and North Sea– Atlantic islands and Morocco** | **241** | **90,877** | **377** |
| Antwerp - Azores | 1 | 568 | 568 |
| Antwerp - Cabo de Guer | 81 | 42,889 | 529 |
| Antwerp - Canaria | 15 | 2,968 | 198 |
| Antwerp - Principe (island) | 1 | 333 | 333 |
| Antwerp - La Palma | 17 | 4,392 | 258 |
| Antwerp - Madera | 17 | 2,988 | 176 |
| Antwerp - San Miguel | 8 | 4,582 | 573 |
| Antwerp - San Thome | 29 | 5,921 | 204 |
| Dover - Cabo de Guer | 1 | 200 | 200 |
| Lisbon - San Thome | 67 | 25,507 | 381 |
| London - Cabo de Guer | 1 | 70 | 70 |
| Plymouth - La Palma | 1 | 100 | 100 |
| Rouen - Cabo de Guer | 1 | 258 | 258 |
| Southampton - Azores | 1 | 100 | 100 |
| **Atlantic Ocean and North Sea–Baltic** | **43** | **22,331** | **519** |
| Amsterdam - Danzig | 11 | 3,050 | 277 |
| Amsterdam - Femern | 1 | 200 | 200 |
| Amsterdam - Lübeck | 2 | 500 | 250 |
| Antwerp - Danzig | 11 | 1,831 | 166 |
| Antwerp - Helsingor | 1 | 500 | 500 |
| Antwerp - Narva | 1 | 2,638 | 2,638 |
| Antwerp - Stockholm | 6 | 8,202 | 1,367 |
| Danzig - Lisbon | 1 | 200 | 200 |
| Dieppe - Hamburg | 1 | 1,200 | 1,200 |
| London - Narva | 5 | 3,410 | 682 |
| Rotterdam - Stockholm | 1 | 300 | 300 |
| Zeeland - Danzig | 2 | 300 | 150 |
| **(To and from) America** | **26** | **9,897** | **380** |
| Cadiz - Santo Domingo | 1 | 233 | 233 |
| Cabo Verde - New Spain | 2 | 2832 | 1416 |
| Lisbon - Jamaica | 3 | 192 | 64 |
| Livorno - Brazil | 3 | 733 | 244 |
| Sanlucar - Santo Domingo | 1 | 400 | 400 |
| Seville - Cuba | 1 | 400 | 400 |
| Seville - Honduras | 1 | 453 | 453 |
| Seville - Jamaica | 1 | 133 | 133 |
| Seville - New Spain | 2 | 590 | 295 |
| Seville - Puerto de Cavallos | 1 | 1,025 | 1,025 |
| Seville - Santo Domingo | 9 | 2,305 | 256 |
| Seville - Tierra Firme | 1 | 600 | 600 |
| **Mediterranean (internal)** | **17** | **7,617** | **448** |
| Alicante - Genoa | 4 | 2,324 | 581 |
| Alicante - Livorno | 5 | 2,801 | 560 |
| Cadiz - Livorno | 5 | 2,050 | 410 |
| Cadiz - Valencia | 2 | 285 | 143 |
| Civitavecchia - Livorno | 1 | 157 | 157 |
| **(To and from) India** | **16** | **3,900** | **232** |
| Lisbon - Calicut | 14 | 3,567 | 255 |
| Lisbon - Cochin | 2 | 333 | 167 |
| **Balticum (internal)** | **7** | **1,487** | **212** |
| Lübeck - Narva | 7 | 1,487 | 212 |
| **Atlantic islands and Morocco–Mediterranean** | **6** | **1,185** | **198** |
| Sanlucar - Cabo Verde | 1 | 403 | 403 |
| Sevilla - Cabo Verde | 5 | 782 | 156 |
| **All routes** | **1,613** | **582,768** | **344** |

*Source*: Authors’ database, based on FAA, Insolvente Boedelkamer, Account books of Juan Henriquez, IB #2314 and 2315, and Wastiels (1967).

## Supplementary Table 2

## Determinants of the insurance premium in the account books of Juan Henriquez (dependent variable is ln(premium))

|  |  |  |  |
| --- | --- | --- | --- |
| Regression: | (1) | (2) | (3) |
| Ln(distance (1,000 sea miles)) |  | 0.675 | 0.351\*\*\* |
|  |  | (0.123) | (0.000) |
| Ln(insured value (1,000 £ Fl. gr.)) | –0.016\*\*\* | –0.016\*\*\* | –0.005\* |
|  | (0.004) | (0.005) | (0.473) |
| Ln(number of insured ships) | –0.017 | –0.017 | –0.104\*\*\* |
|  | (0.509) | (0.511) | (0.003) |
| Ln(policy holder: number of contracts) | 0.005 | 0.005 | 0.011 |
|  | (0.371) | (0.361) | (0.139) |
| Two way voyage | 0.425\*\*\* | –0.043 | 0.220\*\* |
|  | (0.000) | (0.889) | (0.015) |
| *Routes* |  |  |  |
| *Atlantic Ocean / North Sea* |  |  |  |
| Amsterdam – Bordeaux | 0.136\*\*\* | 0.116\*\* |  |
|  | (0.004) | (0.017) |  |
| Amsterdam – Lisbon | –0.168\*\*\* | –0.436\*\* |  |
|  | (0.001) | (0.016) |  |
| Antwerp – Bay of Biscay | –0.220\*\*\* | –0.243\*\*\* |  |
|  | (0.000) | (0.000) |  |
| Antwerp – Dieppe | –0.568\*\*\* | 0.298 |  |
|  | (0.000) | (0.597) |  |
| Antwerp – Lisbon | –0.031 | –0.285\* |  |
|  | (0.191) | (0.087) |  |
| Antwerp – London | –0.750\*\* | 0.171 |  |
|  | (0.000) | (0.776) |  |
| Antwerp – Nantes | –0.134\*\*\* | –0.026 |  |
|  | (0.006) | (0.762) |  |
| Antwerp – Rouen | –0.336\*\*\* | 0.235 |  |
|  | (0.001) | (0.529) |  |
| Antwerp – Saint-Malo | –0.339\*\*\* | 0.141 |  |
|  | (0.000) | (0.654) |  |
| Antwerp – San Sebastian | –0.220\*\*\* | –0.259\*\*\* |  |
|  | (0.000) | (0.000) |  |
| London – Bordeaux | –0.003 | 0.041 |  |
|  | (0.952) | (0.441) |  |
| Zeeland – Bordeaux | 0.084\* | 0.131\*\* |  |
|  | (0.089) | (0.024) |  |

|  |  |  |  |
| --- | --- | --- | --- |
| *Atlantic Ocean / North Sea – Atlantic Islands / Morocco* |  |  |  |
| Antwerp – Cabo de Guer | 0.074\*\*\* | –0.341 |  |
|  | (0.007) | (0.190) |  |
| Antwerp – Canaria | 0.300\*\*\* | –0.74 |  |
|  | (0.000) | (0.467) |  |
| Antwerp – La Palma | 0.229\*\*\* | –0.345 |  |
|  | (0.000) | (0.358) |  |
| Antwerp – Madeira | 0.156\*\*\* | –0.328 |  |
|  | (0.000) | (0.303) |  |
| Antwerp – San Thome | 0.797\*\*\* | –0.399 |  |
|  | (0.000) | (0.607) |  |
| Lisbon – San Thome | 0.237\*\*\* | –0.777 |  |
|  | (0.000) | (0.238) |  |
| *Atlantic Ocean / North Sea – Baltic* |  |  |  |
| Antwerp – Danzig | 0.013 | –0.162 |  |
|  | (0.842) | (0.213) |  |
| *Atlantic Ocean / North Sea – Mediterranean* |  |  |  |
| Antwerp – Cadiz | –0.043 | –0.421\* |  |
|  | (0.262) | (0.090) |  |
| Antwerp – Livorno | 1.112\*\*\* | 0.375 |  |
|  | (0.000) | (0.434) |  |
| Antwerp – Malaga | 0.292\*\*\* | –0.144 |  |
|  | (0.000) | (0.615) |  |
| Antwerp – Marseille | 0.671\*\*\* | –0.012 |  |
|  | (0.000) | (0.979) |  |
| Antwerp – Mazaron | 0.482\*\*\* | –0.033 |  |
|  | (0.000) | (0.923) |  |
| Antwerp – Seville | –0.049\*\* | –0.447\* |  |
|  | (0.033) | (0.084) |  |
| Antwerp – Tavira | –0.126\*\* | –0.464\*\* |  |
|  | (0.016) | (0.040) |  |
| Antwerp – Valencia | 0.732\*\*\* | 0.158 |  |
|  | (0.000) | (0.676) |  |
| *Intercontinental routes* |  |  |  |
| Lisbon – Calicut | 0.497\*\*\* | –1.1219 |  |
|  | (0.000) | (0.274) |  |
|  |  |  |  |
| *Month* |  |  |  |
| January | 0.125\*\*\* | 0.127\*\*\* | 0.160\*\*\* |
|  | (0.006) | (0.005) | (0.009) |
| February | 0.261\*\*\* | 0.263\*\*\* | 0.328\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
| March | 0.237\*\*\* | 0.240\*\*\* | 0.264\*\*\* |
|  | (0.000) | (0.000) | (0.000) |

|  |  |  |  |
| --- | --- | --- | --- |
| April | 0.149\*\*\* | 0.151\*\*\* | 0.147\*\* |
|  | (0.001) | (0.0015) | (0.012) |
| May | –0.024 | –0.022 | –0.017 |
|  | (0.583) | (0.613) | (0.767) |
| June | 0.039 | 0.040 | 0.039 |
|  | (0.377) | (0.360) | (0.519) |
| August | –0.056 | –0.054 | –0.054 |
|  | (0.195) | (0.203) | (0.346) |
| September | –0.016 | –0.014 | 0.055 |
|  | (0.701) | (0.735) | (0.332) |
| October | –0.006 | –0.004 | 0.089 |
|  | (0.877) | (0.917) | (0.107) |
| November | 0.073\* | 0.160\* | 0.089\*\* |
|  | (0.087) | (0.078) | (0.010) |
| December | 0.084\* | 0.146\*\* | 0.152\*\* |
|  | (0.054) | (0.049) | (0.010) |
| Number of observations: | 1,152 | 1,152 | 1,152 |
| R-squared | 0.722 | 0.723 | 0.454 |

\* = Significant at the 10 percent level.

\*\* = Significant at the 5 percent level.

\*\*\* = Significant at the 1 percent level.

*Note*:The reference category for route is Antwerp – Bordeaux (mean premium percentage is 7.005 percent) and the reference category for month is July.

*Source*: Authors’ database, based on FAA, Insolvente Boedelkamer, Account books of Juan Henriquez, IB #2314 and 2315, and Wastiels (1967).

*Marketing and Pricing Risk in Marine Insurance*  9

## Supplementary Table 3

## PEARSON CORRELATION COEFFICIENTS (1,471 INSURANCE CONTRACTS)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Insurance premium (percent of insured value) | 1.000 |  |  |  |  |  |  |
| 2 | Number of underwriters | 0.064 | 1.000 |  |  |  |  |  |
| 3 | Distance (1,000 nautical miles) | 0.403 | 0.018 | 1.000 |  |  |  |  |
| 4 | Insured value (1,000 £ Fl. gr.) | –0.032 | 0.646 | –0.026 | 1.000 |  |  |  |
| 5 | Number of insured ships | –0.089 | –0.001 | –0.047 | 0.227 | 1.000 |  |  |
| 6 | Insurance purchaser: number of contracts | –0.017 | 0.118 | –0.021 | 0.0812 | –0.039 | 1.000 |  |
| 7 | Two way voyage | 0.192 | –0.044 | 0.357 | –0.042 | –0.025 | –0.016 | 1.000 |
|  | *Voyages from/to Antwerp and from the Low Countries* |  |  |  |  |  |  |  |
| 8 | Antwerp departure | –0.132 | –0.224 | –0.138 | –0.106 | 0.003 | –0.240 | 0.022 |
| 9 | Antwerp destination | 0.095 | 0.164 | –0.051 | 0.119 | 0.030 | 0.179 | –0.078 |
| 10 | Low Countries departure | –0.061 | –0.020 | –0.118 | –0.017 | –0.005 | 0.008 | 0.017 |
|  | *Routes* |  |  |  |  |  |  |  |
| 11 | Atlantic Ocean / North Sea | –0.359 | –0.082 | –0.479 | –0.013 | –0.007 | 0.247 | –0.041 |
| 12 | Atlantic Ocean / North Sea – Atlantic Islands / Morocco | 0.152 | 0.091 | 0.343 | 0.025 | –0.076 | –0.028 | –0.006 |
| 13 | Atlantic Ocean / North Sea – Baltic | –0.031 | 0.019 | –0.05 | –0.025 | –0.006 | –0.096 | –0.015 |
| 14 | Atlantic Ocean / North Sea – Mediterranean | 0.244 | –0.005 | 0.064 | 0.009 | 0.098 | –0.243 | –0.011 |
| 15 | Mediterranean | 0.032 | 0.080 | –0.053 | 0.023 | –0.026 | –0.009 | –0.011 |
| 16 | Intercontinental | 0.147 | –0.010 | 0.652 | –0.021 | –0.039 | 0.023 | 0.202 |
| 17 | Other routes | –0.037 | 0.001 | –0.018 | –0.023 | –0.020 | 0.038 | –0.008 |

*Source*: Authors’ database, based on FAA, Insolvente Boedelkamer, Account books of Juan Henriquez, IB #2314 and 2315, and Wastiels (1967).