

MARKET FACTORS AFFECTING VALUATIONS OF  
SECOND-HAND FERRIES ON THE KATTEGAT AND IN  
THE WIDER NORDIC REGION IN THE PERIOD BETWEEN  
THE MID-TWENTIETH CENTURY AND THE EARLY 1990s

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## **1.0 Commission**

This report was commissioned by the Scandinavian Star Task Force to provide historic and contextual information accounting for market changes of relevance to the pricing of second-hand ferries in northern Europe between the advent of roll-on, roll-off services in the mid-twentieth century and the Scandinavian Star incident in 1990. There is a particular focus on factors affecting the values of ferries between the early-1980s and the early-1990s. A short bibliography of key sources is at the end of the report.

## **2.0 Summary**

2.1 In the decades between the early-1950s and the early-1990s, the commissioning of new ferries for operation on short-sea shuttle and overnight routes in northern Europe took place in response to economic, political, technological and cultural trends. Generally increasing economic prosperity and mass car production led to great increases in private car ownership and to desires to travel overseas by car. Different taxation policies between the Nordic nations led to tax-free shopping on ferries becoming a significant attraction for growing numbers of leisure travellers who could save money on tobacco, alcoholic drinks, cosmetics and foods by taking ferries for short return trips. These trends, coupled with the effects of economic shocks arising from Arab OPEC nations' quadrupling the price of Gulf Crude in the Autumn of 1973 in protest at Western support for Israel in the Yom Kippur War (the so-called 'Oil Crisis') and the second 'oil shock' brought about by the Iranian Revolution of 1979 led to the commissioning, in quick succession, of three distinct generations of ferries for service in Northern Europe.

2.2 The first of generation ferries, built in the early-to-mid 1960s soon proved too small and a second-generation, built in the late-1960s-early-1970s and approximately twice as capacious, superseded them. The Oil Crisis led to the need for even more capacious ferries to offset the cost of bunkers, leading to the development of a third generation of so-called 'jumbo-ferries'. Governments of European nations with shipbuilding industries provided subventions to shipyards to encourage the ordering of new tonnage, the intention being to protect threatened jobs, but a consequence was over-capacity of

newbuild ferries, some of which prematurely entered the second-hand market, and lowered market values for the existing ferries these displaced. The building within approximately twenty years of three generations of ferry for the same routes led to general over-capacity in the second-hand ferry market in the first half of the 1980s. By the end of the 1980s, this over-capacity had been absorbed and second-hand prices increased against a backdrop of strong economic growth in the 1985-1987 period. New routes subsequently opened in the early-1990s between Sweden/Finland and Estonia and between Denmark/Sweden and Eastern Germany/Poland on account of the opening up of Eastern Europe and this created renewed demand, particularly for ferries of the second generation.

### **3.0 Kattegat and Skagerrak ferry operators between the 1930s and 1970s**

3.1 The incumbent operators of scheduled short-sea passenger, mail and cargo services across the Skagerrak and Kattegat were Det Forenede Dampskibs-Selskab (DFDS) of Copenhagen, founded in 1866, and Kristiansands Dampskibsselskab of Kristiansand (KDS), founded in 1899. Until the second half of the 1930s, they had in effect a monopoly over the provision of steamship services between Norway and Denmark, including the carriage of mail.

3.2 The pioneer car ferry service was commenced in 1936 between Gothenburg in Sweden and Frederikshavn in Denmark by Göteborg-Frederikshavn Linjen, a specially-formed company owned by a consortium of Swedish shipping, railway and municipal investors. Its ferry was the small, side-loading Kronprinsessan Ingrid, purpose-built by Frederikshavn Skibsværft. In the post-war era, the company later promoted itself as Sessanlinjen and by the early-1960s it had become the prime operator between Gothenburg and Frederikshavn.

3.3 In 1937, Larvik-Frederikshavnferjen, commenced a seasonal ferry service between Larvik in Norway and Frederikshavn, operating between late-spring and early-autumn. Because the company was the creation of a consortium of Norwegian and Danish bus operators, it required a drive-through ferry on which buses could be carried. The Peter Wessel (I) was built by Aalborg Værft to a design by the Danish naval architect Knud

E. Hansen, who was already well-known for his advanced designs for ferries for Danish domestic services, and it was reputedly the first ever drive-through passenger-carrying vessel for international, open-sea service.

3.4 In 1939, Kristiansands Dampskibsselskab introduced the stern-loading car and train ferry Skagerak I, Aalborg-built to run between Hirtshals and Kristiansand, but the outbreak of the Second World War led to the suspension of this and the other ferry services from Sweden and Norway to Denmark.

3.5 In 1961, a Norwegian operator of coastal cargo vessels, Jens Cato Hagen, commenced Da-No Linjen between Oslo and Aarhus using a purpose-built, stern-loading passenger, car and freight ferry named the Holger Danske. As Hagen's existing business was in the freight sector, Da-No Linjen was orientated more towards the carriage of trucks than others in the Norway-Denmark ferry trade.

3.6 In 1965, DFDS introduced two car ferries between Frederikshavn and Oslo, the Akershus, which was purpose-built for DFDS by Helsingør Skibsværft, and the Skipper Clement, which was purchased second-hand, having been completed two years before by Bartram & Co. of Sunderland for a different Danish company in Bornholm. The DFDS service provided night crossings only with the ferries tied up alongside during each day.

3.7 In 1962 a Danish entrepreneur, Poul Ludvigsen, attempted to provide tax-free shopping passenger day-cruises for Swedes between Gothenburg and Skagen, using a ferry chartered from Bornholm, the Østersøen, but had insufficient capital, and thus soon became bankrupt. A Swedish entrepreneur, Sten Allan Olsson, whose existing businesses included scrap metal recovery and coastal cargo shipping, quickly took over the charter of the ferry and re-commenced the operation under the name Skagenlinjen. In 1965 Sten Allan Olsson began a ferry service between Gothenburg and Frederikshavn under the name Stena Line using the purpose-built ferry Stena Danica

(I). For the next 17 years, Stena Line and Göteborg-Frederikshavn Linjen/Sessanlinjen were competitors on the route.

3.8 In 1968, Fred. Olsen & Co. of Oslo, founded in 1848, took over Kristiansands Dampskibsselskab.

3.9 The Oil Crisis of 1973 caused a severe downturn in ferry operators' profitability and so DFDS closed its routes between Aalborg, Frederikshavn and Oslo in 1974. The principal ferry companies providing services from ports in northern Jutland in Denmark to ports in Eastern Norway and to Gothenburg in Sweden thereafter were:

Fred. Olsen & Co./Kristiansands Dampskibsselskab – Hirtshals-Kristiansand

Da-No Linjen – Oslo-Aarhus

Larvik-Frederikshavnferjen – Larvik-Frederikshavn

Göteborg-Frederikshavn Linjen/Sessanlinjen – Gothenburg-Frederikshavn

Stena Line – Gothenburg-Frederikshavn

#### **4.0 The three generation of Scandinavian short-sea ferry**

4.1 In the second half of the 1950s, Knud E. Hansen built upon experience gained with initial drive-through ferries such as the Peter Wessel (I) of 1937 to develop a very efficient drive-through ferry type for Scandinavian short-sea routes. This was economical, enabling relatively high passenger and vehicle capacities within compact dimensions, good manoeuvrability and operational efficiency. In the 1960-1968 period, many examples of the type were built for use on Danish domestic routes across the Kattegat between ports in Jutland and Zealand and also for international routes from Denmark to West Germany, Norway and Sweden. Examples of the type used on routes from northern Jutland to Norway and Sweden in the latter 1960s and early 1970s were:

Cort Adeler – Larvik Frederikshavnferjen, Larvik-Frederikshavn, 1961, 2,913grt, 800 pass, 207 berths, 140 cars.

Skagerak – Kristiansands Dampskibsselskab, Kristiansand-Hirtshals, 1965, 2703grt, 845 pass, 130 berths, 140 cars (sank in a storm in September 1966).

Skipper Clement –DFDS, Frederikshavn-Oslo, 1963, 2,964grt, 1,000 pass, 268 berths, 100 cars.

Stena Danica (I) – Stena Line, Gothenburg-Frederikshavn, 1965, 2,690grt, 1,000 pass, 57 berths, 129 cars.

Stena Baltica (I) – Stena Line, Gothenburg-Skagen/Frederikshavn, 1966, 1,157grt, 580 pass, 0 berths, 50 cars.

Christian IV – Kristiansands Dampskibsselskab (built as a replacement for Skagerak), 1968, 4,103grt, 775 pass, 143 berths, 140 cars.

Peter Wessel (II) – Larvik-Frederikshavnferjen, Larvik-Frederikshavn, 1968, 3,100grt, 890 pass, 280 berths, 140 cars.

4.2 Göteborg-Frederikshavn Linjen/Sessanlinjen, meanwhile, developed its own distinct approach to ferry design, which placed the engines astern and used large lifts to move cars into lower hold spaces in the bottom of the midships hull. This was applied to a series of similar ferries built by Aalborg Værft in the early-to-mid 1960s:

Prinsessan Christina (I), 1960, 2,240grt, 809 pass, 40 berths, 152 cars.

Prinsessan Margaretha (II), 1963, 2,866grt, 1,034 pass, 76 berths, 140 cars.

Prinsessan Desirée (I), 1965, 4,217grt, 1,040 pass, 54 berths, 126 cars.

4.3 The Holger Danske of Da-No Linjen and the Akershus of DFDS were unique designs, though in terms of dimensions, gross registered tonnage and capacity, they were in general alignment with the common identifiable characteristics of the wider ‘first generation.’

4.4 Such was the growth in demand for ferry travel in the second half of the 1960s that nearly all of the ‘first generation’ ferries very quickly were found to be too small and so the operators ordered a second generation to supersede them.

4.5 Knud E. Hansen A/S was also responsible for designing most of the ferries of the second generation, which were introduced between 1969 and 1973. Typically, they were twice as big in terms of tonnage and capacity as the ferries of the first generation and the examples for overnight service had a higher proportion of cabin berths, whereas in the first generation, many more passengers slept in reclining chairs. The additional berthed capacity enabled the expansion of the tax-free shopping mini-cruise market, generating additional profits out with the summer holiday peak season. Examples of the type built for use on Denmark to Norway and Sweden routes in the latter 1960s and early 1970s were:

Stena Danica (II) – Stena Line, Frederikshavn-Gothenburg, 1969, 5,537grt, 1,530 pass, 250 cars.

Terje Viggen (I) – Da-No Linjen – Aarhus-Oslo, 1972, 5,731grt, 700 pass, 410 berths, 170 cars.

Peter Wessel (III) – Larvik-Frederikshavnferjen, Frederikshavn-Larvik, 1973, 6,801grt, 1,500 pass, 634 berths, 270 cars.

3.6 In the early-1970s, Sten Allan Olsson discovered that by ordering ferries from shipyards in Yugoslavia, it was possible to buy two ferries for only a little more than the price of one built in West Germany and so he ordered four from there, two overnight examples for the Gothenburg-Kiel route plus two day-time ferries for service between Gothenburg and Frederikshavn:



Stena Danica (III), 1973, 6,333grt, 1,800 pass, 250 cars.

Stena Jutlandica (I), 1974, 6,333grt, 1,800 pass, 250 cars.

The Yugoslavian-built Gothenburg-Kiel ferries Stena Olympica and Stena Scandinavica made in addition day-return trips between Gothenburg and Frederikshavn, interspersed between their overnight sailings to and from West Germany.

4.7 Göteborg-Frederikshavn Linjen/Sessanlinjen also ordered two, larger 'second generation' ferries from Aalborg Værft, with which it had a long-standing relationship:

Prinsessan Christina (II), 1969, 5,679grt, 1,400 pass, 184 berths, 360 cars.

Prinsessan Desirée (II), 1971, 5,694grt, 1,400 pass, 126 berths, 360 cars.

4.8 Fred. Olsen & Co./Kristiansands Dampskibsselskab commissioned two ferries, the 2,719grt Buenvista, and Bonanza of 1971-72, for summer operation as passenger and car ferries between Hirtshals and Kristiansand and for winter use as freight vessels from the Canary Islands to the Netherlands, between which Fred. Olsen & Co. had a liner service carrying tomatoes and general cargo. They proved unsuccessful, being too small. A third, bigger passenger, road vehicle and train ferry, the 5,330grt Borgen, was then ordered from Aalborg Værft and delivered in 1975. With space for 1,622 pass, 335 berths, 270 cars, it aligned with the general characteristics of other ferries of its generation.

4.9 It will be understood from the above that between 1969 and 1973, ten new ferries were placed in service from ports in Northern Jutland to ports in Eastern Norway and Gothenburg in Sweden, which can be considered a lot and representing very substantial investment.

4.10 The Oil Crisis of 1973 resulted in the quadrupling of the cost of oil and a phase of consequently increased inflation ensued. The former negatively affected ferry operators by sharply increasing the cost of fuel while the latter caused salary bills and other running costs to grow too.

4.11 When DFDS withdrew its Aalborg/Frederikshavn-Oslo services, it sold the ferry Akershus to Mexico. Unable immediately to find a buyer for the Skipper Clement, it was chartered out and eventually sold to Jadrolinija in Yugoslavia. Both vessels were of high-quality construction and the Akershus, in particular, was very well appointed but with too little capacity to be sufficiently profitable in the Denmark-Norway trade.

4.12 Da-No Linjen could not afford to operate the Terje Vigen, which was chartered from the West German shipowner Reinecke. The Aarhus-Oslo route was relatively long and with a consequently higher fuel-burn than, for example, the Frederikshavn-Larvik route. The ferry was therefore withdrawn in 1975 and sold by its owner. Various other brief and unsuccessful attempts were thereafter made to perpetuate the Aarhus-Oslo route, but it proved impossible to make viable. Da-No Linjen later continued using only the smaller, older Holger Danske on a shorter Oslo-Frederikshavn route. Whereas DFDS had only sailed night crossings, the Holger Danske made a return trip within every 24 hours.

4.13 To offset increased costs, it would be necessary for the other operators to build much bigger ferries, providing an approximate doubling of capacity in comparison with those of the recently introduced second generation. The ability to carry many more passengers and vehicles, would help to offset the costs of bunker oil, staffing and depreciation through better economy of scale while also providing much more indoor deck space for onboard revenue generation (large hallways with rows of slot-machines, walk-in tax-free supermarkets, several bars, etc).

4.14 Since the late-1960s, Stena AB, the parent company of Stena Line, had built many freight ferries specifically for chartering out though time-charters to other operators. State-owned operators such as British Rail/Sealink had been unable to gain finance to build new vessels and so chartering from Stena provided an alternative way of adding freight capacity.

4.15 Shortly before the Oil Crisis, at the request of Sten Allan Olsson, Knud E. Hansen A/S developed a ferry design with maximised capacity within approximately the same length dimension as existing recently-built Stena ferries. The outcome was a design with the superstructure extended fully aft and the stern squared off and built up to boat deck level (without an open stern mooring deck). The principal challenge in creating the design was controlling cavitation (vibration caused by water and air bubbles churned by the propellers) which could tend to make the aft superstructure above the stern shake. This was achieved to an acceptable level and Stena ordered four examples of the design for use in the charter market; these were delivered in 1974-75 as the Stena Nordica (II), Stena Nautica, Stena Atlantica and Stena Normandica. Although none were used on Kattegat routes, their design proved influential for subsequent Scandinavian ferry design development.

4.16 Another solution by Stena in 1976-1977 to the problem of providing extra capacity to offset increased operating costs was to have the superstructures of its Gothenburg-Frederikshavn ferries Stena Danica and Stena Jutlandica raised by one deck with an extra upper vehicle deck level inserted and side sponsons added to the hull to increase stability. This enlarged the capacity of each ferry from 250 cars to 350 cars.

4.17 The two alternative strategies to increase capacity were therefore (a) to build new ferries of a 'third generation' with approximately double the capacity of 'second generation' examples or (b) to rebuild 'second generation' ferries by lengthening and/or heightening them and adding sponsons.

4.18 In 1979, Stena Line commenced a Frederikshavn-Oslo service in competition with Da-No Linjen, using the Stena Saga, originally the Svenska Lloyd UK-Spain ferry Patricia, which Stena had rebuilt with the vehicle deck heightened, increasing its car capacity from 175 to 275, and extra superstructure added forward and aft of the original superstructure, increasing the berthed capacity from 748 to 949.

4.19 In the mid-to-late 1970s, governments of the Nordic nations were very worried about the lack of orders for new ships in their nations' shipyards and so they offered subventions to encourage shipping companies to place orders. In the instances of Sweden and Finland, these subsidies resulted in orders being placed by Swedish and

Finnish commercial ferry operators for ‘third generation’ so-called ‘jumbo ferries’ of high capacity. (In the case of Denmark, new train ferries were ordered for DSB for the Great Belt service).

4.20 The ‘Oil Shock’ that followed the Iranian Revolution of 1979 led to a further sharp increase in the cost of oil with temporary knock-on consequences for ferry operators.

4.21 Both Stena Line and Göteborg-Frederikshavn Linjen/Sessanlinjen ordered two new ferries for the Gothenburg-Frederikshavn route. Stena ordered its ferries from the Chantiers du Nord et de la Méditerranée shipyard in Dunkerque in France. Göteborg-Frederikshavn Linjen/Sessanlinjen, meanwhile, developed a design with Aalborg Værft, intending to order two examples from there. The Swedish government intervened by providing a subvention for their construction at the Svenska Varv Götaverken Arendal Shipyard in Gothenburg. The Stena Line concept was to offer mini-cruise passengers only day-trips, whereas the Göteborg-Frederikshavn Linjen/Sessanlinjen concept was to provide in addition overnight mini-cruises, leaving in the evening and returning early the next morning and so its vessels had some overnight berth capacity and also show-lounges with tiered seating, filling the triangular space above the aft internal ramps giving access from the lower to the upper vehicle deck:

Kronprinsessan Victoria, 1981, 14,378grt, 2,100 pass, 400 berths, 700 cars.

Prinsessan Birgitta (II), 1982, 14,378grt, 2,100 pass, 400 berths, 700 cars.

Stena Danica (IV), 1983, 15,899grt, 2,300 pass, 96 berths, 630 cars.

Stena Jutlandica (II), 1983, 15,899grt, 2,300 pass, 96 berths, 630 cars.

4.22 The Swedish banks financing the new ferries began to worry that Göteborg-Frederikshavn Linjen/Sessanlinjen was becoming financially strained and therefore

might be unable to afford to pay fully for the ferries it had ordered from Svenska Varv. Furthermore, a wider concern was that if all four new ferries were to enter service as planned between Gothenburg and Frederikshavn, there would be over-capacity. In 1980-81, Stena AB mounted a successful take-over of Göteborg-Frederikshavn Linjen/Sessanlinjen. The new Göteborg-Frederikshavn Linjen/Sessanlinjen ferries were therefore only briefly used between Gothenburg and Frederikshavn in 1981-82 on account of the completion of the new Stena Line ferries being delayed. When the Stena Danica entered service, the Kronprinsessan Victoria was altered with extra overnight cabins for use instead between Gothenburg and Kiel and the Prinsessan Birgitta was chartered out to Sealink UK for North Sea service between Harwich and Hoek van Holland. In 1988, when Stena Line took delivery of the second of two new Gothenburg-Kiel ferries, the Kronprinsessan Victoria was moved to the Frederikshavn-Oslo route and was renamed as the Stena Saga (II).

4.23 Rather than building new ferries for the Hirtshals-Kristiansand route, in 1981-82, Fred. Olsen & Co./Kristiansand Dampskibsselskab rebuilt the existing ferry Borgen, lengthening it amidships and also raising the superstructure by one deck to insert an upper car deck. It also modified another ferry, the Bolero, converting part of its main cabin deck into an extra upper car deck. (The Bolero was very similar to Massalia/Scandinavian Star and is described below in section 8.).

4.24 Concurrently with the building of the new Göteborg-Frederikshavn Linjen/Sessanlinjen ferries, another Swedish ferry operator, Rederi AB Gotland, which linked the island of Gotland with Swedish mainland ports, ordered two large new ferries from Öresundsvarvet in Landskrona. These were built with a Swedish government subvention and completed in 1980-81:

Visby, 1980, 14,932grt, 2,072 pass, 1142 berths, 515 cars.

Gotland/Wasa Star/Peter Wessel (IV), 1981, 14,932grt, 2,072 pass, 1142 berths, 515 cars.

4.25 Concerned that two such ferries would be too big for the Sweden-Gotland market, Rederi AB Gotland instead chartered out the vessel ordered as the Gotland to Vassanlaivat for service in the northern Baltic under the name Wasa Star. Finding it unsuitable for operation in winter ice, Vassanlaivat sub-chartered it to a Greek Mediterranean operator, which did not pay the charter fee. The Wasa Star was seized back and placed for sale by Rederi AB Gotland. In 1983 it was bought by Larvik-Frederikshavnferjen, which had earlier considered rebuilding the Peter Wessel (III) with a midships lengthening and the insertion of an extra upper vehicle deck until the Wasa Star became available for purchase. The vessel entered service in the spring of 1984 between Larvik and Frederikshavn as the Peter Wessel (IV).

4.26 In 1985, Fred. Olsen & Co. purchased from Rederi AB Sally of Mariehamn, Åland Islands, the Viking Song, one of two 'third generation' ferries built with a subvention from the Finnish government by Wärtsilä in Turku for service between Stockholm and Helsinki under the Viking Line marketing name. Completed in 1980, the ferry was superseded on this route by another newbuild from the same shipyard that was approximately twice as big again - the 37,799gt Mariella, which when new was the biggest ferry yet built anywhere in the world. Fred. Olsen renamed the Viking Song as the Braemar and thereafter operated it between Oslo, Hirtshals and Harwich in the UK.

Viking Song/Braemar, 1980, 13,878grt, 2000 pass, 1,250 berths, 462 cars.

4.27 By 1988, there were three recently-built and state-of-the-art jumbo ferries operating between northern Jutland ports and ports in Eastern Norway - the Peter Wessel (IV), Braemar and Stena Saga (II). All had been constructed with government subventions but had been found surplus to requirements on their initial intended routes and were purchased second-hand by leading established Denmark-Norway operators.

4.28 The picture of three generations of increasingly large and capacious ferries being built within approximately 20 years for the same routes was repeated in the central and

southern Baltic spheres of ferry operation. For North Sea routes, of the first and second generations, generally larger ferries with more overnight cabins were built.

First generation ferries built 1961-1969 for central Baltic Sweden-Finland/Gotland routes: 12

First generation ferries built 1961-1969 for southern Baltic Denmark/Sweden-West Germany routes: 8

First generation ferries built 1961-1969 for North Sea UK-Norway/Sweden/Denmark/West Germany routes: 10

Second generation ferries built 1970-1975 for central Baltic Sweden-Finland/Gotland routes: 14

Second generation ferries built 1970-1975 for southern Baltic Denmark/Sweden-West Germany routes: 7

Second generation ferries built 1970-1975 for North Sea UK-Norway/Sweden/Denmark/West Germany routes: 7

Third generation ferries built 1979-1981 for central Baltic Sweden-Finland/Gotland routes: 8

Third generation ferries built 1979-1981 for southern Baltic Denmark/Sweden-West Germany routes: 2

Third generation ferries built 1979-1981 for North Sea UK-Norway/Sweden/Denmark routes: 0

4.29 By 1983, examples of a ‘fourth generation’ of ferry that was larger still had been ordered for use in the central and southern Baltic spheres of operation and so owners of existing vessels would have been aware that yet more recently-built second-hand ferry tonnage would be about to come on to the market.

4.30 Excess tonnage in the Nordic second-hand ferry market was absorbed in a number of ways:

- Through sales to ferry operators in the Mediterranean, the Red Sea, the Americas and elsewhere.
  
- Through some ferries being converted into casino ships for use on short ‘cruises’ from Florida ports and Hong Kong.

4.31 In 1983, following severe losses incurred with its unsuccessful Scandinavian World Cruises project in the USA and the Bahamas, DFDS under new CEO Leif Juul Jørgensen greatly reduced and consolidated its European passenger/car ferry operations, withdrawing seven overnight vessels, which were laid up in Frihavnen in Copenhagen and in Esbjerg. Five of these were sold to operators in developing regions, namely China (the Kong Olav V and Prinsesse Margrethe, built 1968, and the Dana Corona, built 1969), one for Red Sea Muslim pilgrim service between Egypt and Saudi Arabia (the Dana Sirena, built 1970) and one to Malaysia (the Prinz Oberon, built 1970). A sixth, the Winston Churchill, failed to find any buyer and was returned to DFDS service. This situation indicates the low demand for such tonnage at that time.

4.32 In 1982, a new Gothenburg-Frederikshavn ferry operator, Vinga Line, chartered the Prinsessan Christina (II) from Safe Ship Rederi, to which Sessanlinjen had sold it in 1979 with a temporary charter-back until the Kronprinsessan Victoria was completed. Stena quickly bought the vessel from Safe Shipping, causing Vinga Line to cease operations, and redeployed it on a new overnight route between Frederikshavn and Moss and return, interspersed with a daytime Frederikshavn-Gothenburg return



crossing. This gave Stena Line two routes from Frederikshavn to the Oslofjord area, making it a significant operator between Denmark and Eastern Norway.

4.33 In the early-1980s, Stena AB entrepreneurially chartered large super-tankers to major oil companies during the Iran-Iraq war when time-charter rates for tankers were exceptionally high. Perhaps taking inspiration from the tanker industry, which viewed ships as tradeable assets, Stena then applied the same approach in the ferry industry. Stena evidently believed that under-valued second generation ferries were worth acquiring either to charter out to other operators, or to charter out for static use as accommodation ships, or to re-sell to other operators for higher amounts than the earlier purchase prices. It can be seen that during the 1980s, numerous second-hand ferries passed through the ownership of Stena-controlled companies. Until 1989, Stena Line itself had only four passenger routes, operating six ferries under its own brand, though Stena additionally controlled Lion Ferry AB with three Sweden-Denmark routes, each operated by a single ferry. The number of ferries briefly owned by Stena companies was far greater than its own route network required.

## **5.0 The markets for second-hand ferries in the 1980s-1990s**

5.1 The North European ferry market was the largest of several distinct ferry markets in the world, each with their own characteristics. The Mediterranean was another, but served to a very large extent by ferries designed primarily for transport rather than leisure purposes and without the Scandinavian commercial examples' extensive tax-free shopping and other leisure-orientated facilities. Also, Mediterranean ferries were more frequently stern-loaders only and many of the purpose-built 1960s-70s generations were less manoeuvrable than Scandinavian ones, requiring the assistance of tugs to berth or unberth. Greek domestic and cross-Adriatic commercial ferry operators were significant purchasers and converters of second-hand vessels, acquired from northern Europe and, later on, also from Japan.

5.2 In the USA, ferries operating in domestic service required to be US-built to comply with the Jones Act (US protective legislation for shipping in coastal trade) and were strictly for the provision of transport. There was, however, a certain amount of trade in

second-hand vessels from Scandinavia and the Mediterranean for services in Canada, the Caribbean, central and South America. The ownership trajectory of the Massalia/Stena Baltica/Island Fiesta/Scandinavian Star fits this pattern. Stena had since the late 1960s sold and chartered ferries to Canadian operators.

5.3 Japan was another major area of ferry operation, using exclusively new, purpose-built vessels. Japanese ferries, in common with all Japanese ships, have shorter depreciation times than in Europe and so many Japanese ferries entered the second-hand market in the 1980s. Japanese domestic ferries were mostly not built in compliance with international classification regulations and their passenger accommodation contained open dormitories with tatami flooring and Onsen communal baths, which required extensive reconstruction for use elsewhere. These factors made them unattractive from the perspective of European international operators, although Greek operators bought and very extensively converted Japanese vessels, primarily for use on Aegean services.

5.4 Areas of the developing world, such as the nations fringing the Red Sea and China also bought small numbers of formerly European ferries at points when prices were sufficiently low. Many Japanese ferries were sold second-hand to the Philippines and Indonesia.

## **6.0 Economic and market trends affecting ferry sales prices in the 1985-1990 period.**

6.1 In the period immediately after 1985, the economies of north European nations grew unevenly by between approximately three and six per cent per annum and expansion in the 'white collar' sector was particularly strong. Citizens had more disposable income to spend on consumer goods and ferry operators benefitted through increased holiday-making and the provision of mini-cruises for tax-free shopping.

6.2 The global price of oil dropped from 27 to 13 dollars per barrel between 1985 and 86, making the profit potential of ferries greater than it had been in the first half of the decade.

6.3 Later, after the fall of the Iron Curtain, there was an expansion in the early-1990s of ferry routes between Sweden/Denmark and Poland/Eastern Germany and between Sweden/Finland and Estonia. New and existing operators needed additional ferries of the ‘second generation’ type and so their values grew significantly.

Ferries introduced in these trades in the 1989-1992 period included:

1989 Tallink (ex-Scandinavian Sky of SeaEscape), Helsinki-Tallinn, acquired by Tallink from Star Cruises, a company managed by Niels-Erik Lund.

1990 Nord Estonia (ex-Dana Regina of DFDS), Estline, Stockholm-Tallinn, acquired by Norström & Thulin from Marne Investments, a company managed by Niels-Erik Lund.

1990 Anna Karenina (ex-Braemar of Fred. Olsen Lines), chartered by Russian Baltic Shipping Company from Fred. Olsen & Co.

1991 Corbiere, Helsinki-Tallinn, chartered by Linda Line from Marne Investments, a company managed by Niels-Erik Lund.

1992 Balanga Queen (ex-Scandinavian Sun of SeaEscape), Karlskrona-Gdynia, chartered by Corona Line from Belle Meade Shipping, a company managed by Niels-Erik Lund.

6.4 By the end of the 1980s, the first generation ferries, constructed in the early-to-mid 1960s, were significantly depreciated and were too small and under-equipped with passenger facilities to be commercially viable on the main commercially-operated ‘desire line’ routes in the Nordic region as they had developed by that time.

6.5 A combination of general economic growth, reduction in the price of oil and the opening of new routes led ferries of the second generation, which had been undervalued in the latter-1970s and early-1980s, to become highly sought after. Many had been built with facilities in excess of what was strictly required for European overnight ferry routes in the 1970s – and the Massalia/Scandinavian Star was a good example, having cabins with berths for all passengers and an outdoor swimming pool to give potential for ‘cruise-style’ operation.

## **7.0 Sardinia Nova**

7.1 The Sardinia Nova (ex-Tor Anglia), which Da-No Linjen chartered from Tourship/Corsica Ferries/Sardinia Ferries between November 1989 and March 1990, was originally built for Tor Line, a Swedish-Dutch consortium of shipping companies which in 1966 began ferry services between Gothenburg and Immingham and Gothenburg and Amsterdam. Tor Line was one of two Swedish-dominated consortia to begin rival ferry operations between Sweden and the UK in that year. The other, the England-Sweden Line, consisted of two long-established Swedish North Sea operators, Svenska Lloyd and Rederi AB Svea, and one long-established British operator, Ellerman Wilson Line. England-Sweden Line sailed between Gothenburg and Hull and between Gothenburg and Tilbury and its ferries were for their time large and very well-appointed. The passage fares were commensurately relatively high. By contrast, Tor Line's concept was to focus on younger, more budget-conscious travellers and to carry trucks throughout the year. Whereas England-Sweden Line's three ferries had all-berthed overnight accommodation, the two Tor Line ferries had berths for fewer than half of the passengers and reclining seats for the remainder, meaning that its lowest fares significantly undercut those of England-Sweden Line.

7.2 The Tor Anglia measured 7,042grt, carried 980 passengers with 404 berths and had space for up to 300 cars. In 1975, when Tor Line took delivery of the second generation North Sea cruise ferry Tor Britannia, the Tor Anglia was sold to Trans Tirreno Express in Italy but it subsequently returned occasionally to northern Europe under charter. In 1981 it was sold to Sardinia Ferries.

7.3 By comparison with the Tor Anglia/Sardinia Nova, the Massalia/Scandinavian Star had cabins and passenger facilities that were much more extensive. Had the Scandinavian Star been professionally converted for Da-No Linjen, it would surely have provided a much superior standard of service to either the Holger Danske or the Sardinia Nova.

## 8.0 Scandinavian Star

8.1 In the mid-1960s, Knud E. Hansen A/S designed the first two examples of a new type of 'cruise ferry' for Caribbean service between Miami in Florida, the Bahamas and Jamaica. In terms of dimensions, these broadly aligned with the Scandinavian 'second generation', though with superior passenger facilities. The intention was to carry freight in a stern-loaded vehicle deck and cruise passengers, berthed in cabins with shower/toilet cubicles, and with cruise-style dining, entertainment and sun deck facilities. The Freeport was built for the British-owned Freeport Cruise Line by Orenstein & Koppel of Lübeck and the Starward of the Norwegian-owned Norwegian Caribbean Line was built by AG Weser Seebeckwerft of Bremerhaven, both entering service in 1968:

Freeport, 1968, 11,979grt, 690 pass, 690 berths, 170 cars.

Starward, 1968, 12,948grt, 540 pass, 540 berths, 220 cars.

8.2 The French shipbuilder Dubigeon-Normandie of Nantes bought from Knud E. Hansen A/S a modified version of the Freeport and Starward designs to form the basis of a Mediterranean cruise ferry it was to build for the French shipping company Nouvelle Compagnie de Paquebots of Marseilles. This was named the Massalia for service between Marseille, Malaga, Tangier and Casablanca in Morocco. Dubigeon-Normandie then won orders for two additional, similar examples, the Eagle for the British P&O Southern Ferries for a Southampton-Lisbon-Tangier route and the Bolero for a consortium of Norwegian shipowners including Fred. Olsen & Co for an intended route between Södertälje in Sweden and Travemünde in West Germany.

Massalia (1971) 10,513grt, 874 pass, 874 berths, 250 cars.

Eagle (1971) 11,609grt, 740 pass, 740 berths, 200 cars.

Bolero (1973) 14,264grt, 975 pass, 875 berths, 270 cars.

The Eagle and Bolero were similar to Massalia/Scandinavian Star, though with a slightly modified layout of the superstructure passenger decks, very similar to that of the Freeport.

8.3 The Freeport and the Eagle were both British-owned, registered and classed and so they were constructed in compliance with British ‘Method 2’ standards with regard to fire safety with comprehensive sprinkler systems installed throughout their passenger, crew and cargo/vehicle deck spaces.

The Bolero, instead of being used as intended as a ferry on the Baltic Sea, was initially chartered out to Commodore Cruise Line for winter cruise operation from Miami to Caribbean ports and summer overnight ferry service across the Bay of Fundy between Portland, Maine and Yarmouth, Nova Scotia. It was therefore either constructed in accordance with the American ‘Method 1’ fire safety standard, using supposedly non-combustible finishes, but with a sprinkler system only in the vehicle deck, or with the similar French ‘Method 3’ standard. The Massalia was under the French flag and, so far as can be ascertained, was outfitted according to the ‘Method 3’ standard.

8.4 In 1976, the Bolero’s American charters ended and it returned to Europe for North Sea service by Fred. Olsen-Bergen Line. In 1977, it was chartered by Stena Line for four years to operate between Gothenburg and Kiel, plus some winter cruises. In 1981, it was rebuilt as a shuttle-ferry for service between Kristiansand and Hirtshals. A bow visor and ramp were fitted for drive-through operation and inside cabins on the main cabin deck were stripped out to make an upper car deck, loaded through side-ports.

8.5 The Eagle was withdrawn by P&O Southern Ferries in 1975 and sold to Nouvelle Compagnie de Paquebots for Mediterranean service mainly between Toulon, Tangier and Casablanca, operating as the Azur in consort with the Massalia. Cruises were also offered by both vessels.

8.6 In 1974 a new Moroccan state-owned ferry company COMANAV commenced a subsidised ferry service between Marseille, Sete and Tangier in competition with Nouvelle Compagnie de Paquebots. State-subsidised competing companies in the France-North Africa trade made conditions very challenging for the cruise-ferry services provided by Nouvelle Compagnie de Paquebots, which operated without subsidy and with French crewing. In 1984, COMANAV ordered a new ferry from Dubigeon-Normandie of Nantes for delivery in 1986, the 11,515grt, 634-passenger and 220-car capacity Marrakesh. Its imminent entry into service appears to have led Nouvelle Compagnie de Paquebots to give up its France-Morocco ferry services and to sell the Massalia. (The Azur, ex-Eagle, was chartered in 1987 to Chandris Cruises of Greece. It later was operated by Festival Cruises and Mano Cruises and is the only vessel of the series still to exist as the Russian Black Sea cruise ship Knyaz Vladimir).

8.7 In 1984, a Stena company purchased the Massalia from Nouvelle Compagnie de Paquebots and it was renamed as the Stena Baltica. Stena commissioned from Knud E. Hansen A/S a conversion plan apparently to make the vessel suitable for Stena Line Denmark-Norway services, either for the Frederikshavn-Oslo or Frederikshavn-Moss routes. The ferry would have been converted into a drive-through configuration and the superstructure would have been extended aft over the lido to contain a tax-free supermarket and probably either extra cabins, couchette berths and/or reclining seats. Ferries of this type could be relatively easily converted to drive-through configuration, the hull structure from the outset having been made so that this would be possible.

Instead of carrying out this conversion, a charter in the Caribbean was negotiated and the vessel was sent for service between San Juan in Puerto Rico and Santa Domingo in the Dominican Republic under the name Island Fiesta. After a brief period of operation, the charter was cancelled, leaving Stena with the problem of an unwanted ship, which was laid up in Miami, costing port dues, agency dues, crewing, bunkers and victuals. At this point, SeaEscape negotiated a five-year demise charter and the vessel was renamed as the Scandinavian Star. It initially was operated as a short-cruise ship from Florida ports to Cozumel in Mexico and, later, to the Bahamas. The vehicle deck – an extensive and valuable part of the vessel’s internal volume – was not used for its

intended purpose of carrying cars and trucks. On Bahamas cruises, which were day-trips, few of the cabins were used either. Upon taking ownership of the vessel from Stena, SeaEscape planned to sell it. Early in 1990 it was acquired by a subsidiary of the VR-group, after which it was placed in service on the Da-No Linjen Frederikshavn-Oslo route.

8.8 As the Scandinavian Star was not a drive-through ferry, trucks and buses needed to reverse on or off, but on the other hand, the old Stena Saga (used between Frederikshavn and Oslo between 1979 and 1988) was stern loading only, as was the Holger Danske, and so it was thus perfectly possible to run such a ferry between these ports. The lack of a bow door was not a big enough reason to have rejected the ship as unsuitable, especially as in 1990 there were not many available and its other characteristics were a good fit for what Da-No Linjen needed. (When the former-Scandinavian Star was rebuilt after the fire as the Regal Voyager, a bow visor and ramp were retro-fitted, illustrating that this conversion could have been carried out by Da-No Linjen, had it been deemed necessary or a worthwhile investment.)

8.9 To upgrade the Frederikshavn-Moss/Gothenburg services, Stena Line purchased in 1986 the former-Peter Wessel (III), which since Larvik-Frederikshavnferjen's acquisition of the Peter Wessel (IV), ex-Wasa Star, had been operating under charter between Harwich and Hoek van Holland as the Zeeland. It was renamed as Stena Nordica (V). As this ferry had been built for the Larvik-Frederikshavn route, which was pretty much identical to the Frederikshavn-Moss route in terms of duration, port turn-around times and predominant passenger demographic, it was already ideal in terms of its disposition of accommodation and the fact that it already had a drive-through vehicle deck.

8.10 In 1988, Stena Line replaced the Stena Nordica (V) with a bigger ferry, the 10,604grt, 1,700-pass, 740-berth, 554-car capacity Turella, which was purchased from SF-Line (Viking Line). It had been built in 1979 by Wärtsilä, Turku with part of the cost underwritten by a Finnish government subvention. It was renamed as the Stena Nordica (VI).



8.11 In 1988, Fred. Olsen & Co. purchased from the Stocznia im Komuny Parayskiej shipyard in Gdynia, Poland, the incomplete steel structure of a ferry ordered by Stena of the same design as its new Gothenburg-Kiel ferries Stena Germanica and Stena Scandinavica. Fred. Olsen & Co. planned to complete the vessel, probably for service between Hirtshals and Oslo, but instead re-sold it in incomplete condition to the Greek ferry company, ANEK Lines, which completed it in Greece as the El Venizelos. The Stena Germanica and Stena Scandinavica each measured 26,071grt and accommodated 2,500 passengers, 2,204 berthed, plus 569 cars, making them and the eventual El Venizelos, typical third generation ferries.

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