Maritime Strategies International Ltd.

Tanker Shipping Planning Service (TSPS)

Table of Contents

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I. Introduction

The Tanker Shipping Planning Service (TSPS) is a fully interactive Excel based econometric modelling system, used primarily to forecast tanker earnings and vessel values in the oil tanker market. It incorporates three major functions:

- MSI's **Comprehensive database** of the oil and tanker markets consisting of almost 3,000 historical and forecast timeseries from 1980 to 2020, updated every quarter to MSI's latest forecast scenario.

- A **Market Analysis and Forecasting Model** built on sophisticated econometric equations and explicit macroeconomic and industry assumptions, enabling users to generate alternative forecast scenarios based on their own world view and to test the sensitivity of MSI's quarterly Base Case Scenario to key market risks.

- A **Vessel Valuation** tool, enabling users to translate above forecast scenarios into cash flow, re-sale values and key financial return ratios for a specific tanker vessel, from 20,000 Dwt upwards.

Along with our quarterly scenario updates, MSI provides our in-depth TSPS market report to support our data adjustments, detailing the latest tanker industry developments.

II. Data Coverage and Sources

The TSPS provides historical and forecast timeseries data from 1980 to 2020 for:

- Macroeconomic and trade variables including:
  - Annual GDP growth rates by region
  - Industrial production
  - Inflation and interest rates
  - Commodity prices
  - Regional refinery capacity and throughput
  - Vessel operating days

- Oil trade variables including:
  - Oil consumption by region
  - Oil production by region
  - Crude and products imports and exports by region
  - Seaborne crude and product trade flows by route

- Cargo volume and deadweight demand by vessel size segment on 72 crude and 74 product bilateral trades

- Sector-specific fleet dynamics including:
  - Fleet deadweight capacity by vessel type and age
  - Contracting, orderbook, deliveries, cancellations, slippage and scrapping
  - Tanker fleet by hull-type

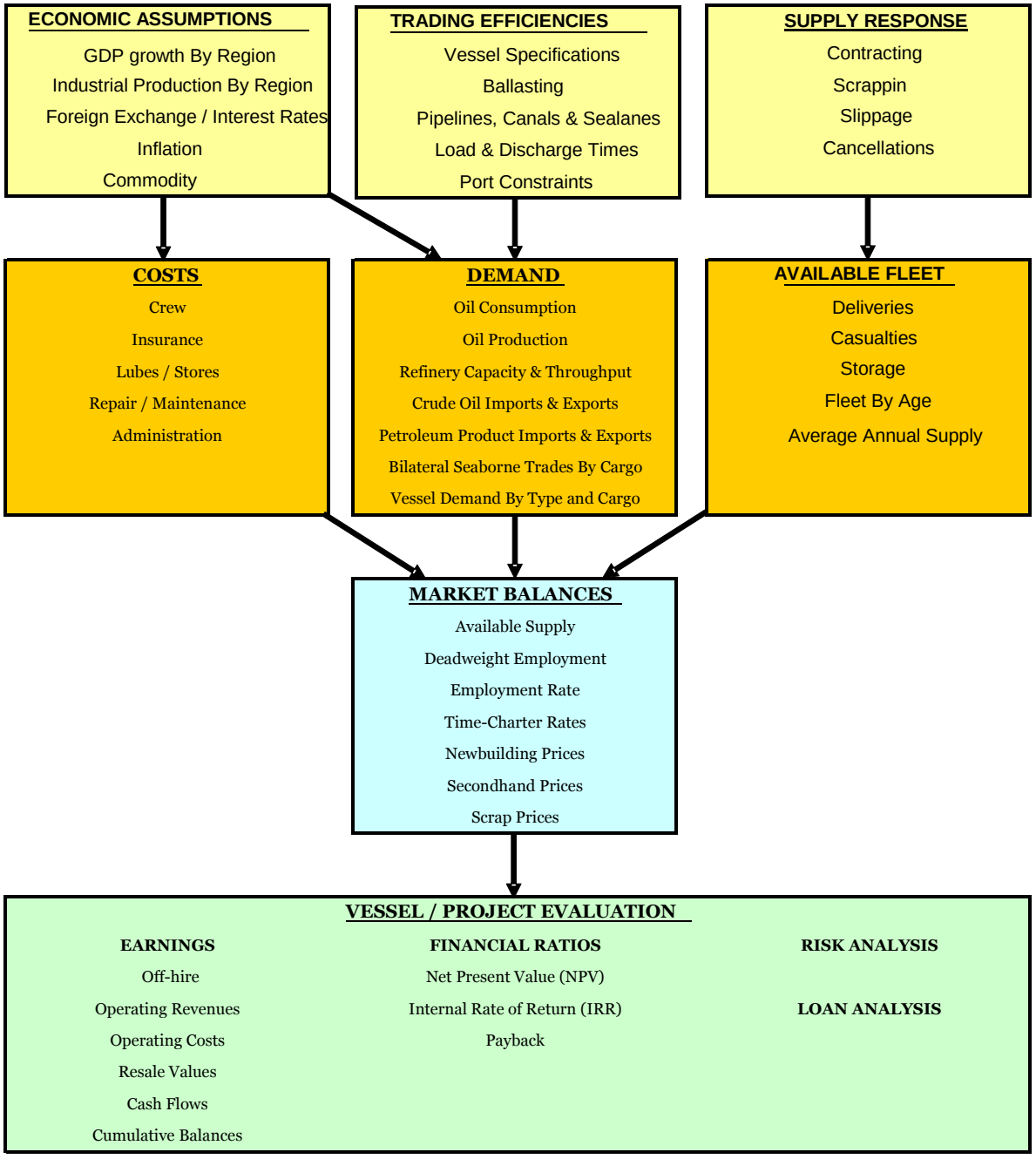
- Sector-specific supply/demand balances and fleet employment rates

- Timecharter rates and vessel operating costs

- Newbuilding, secondhand (by age) and scrap prices for standard tanker sizes

III. Model Structure

Below is a schematic overview of the Tanker Shipping Planning Service model structure.

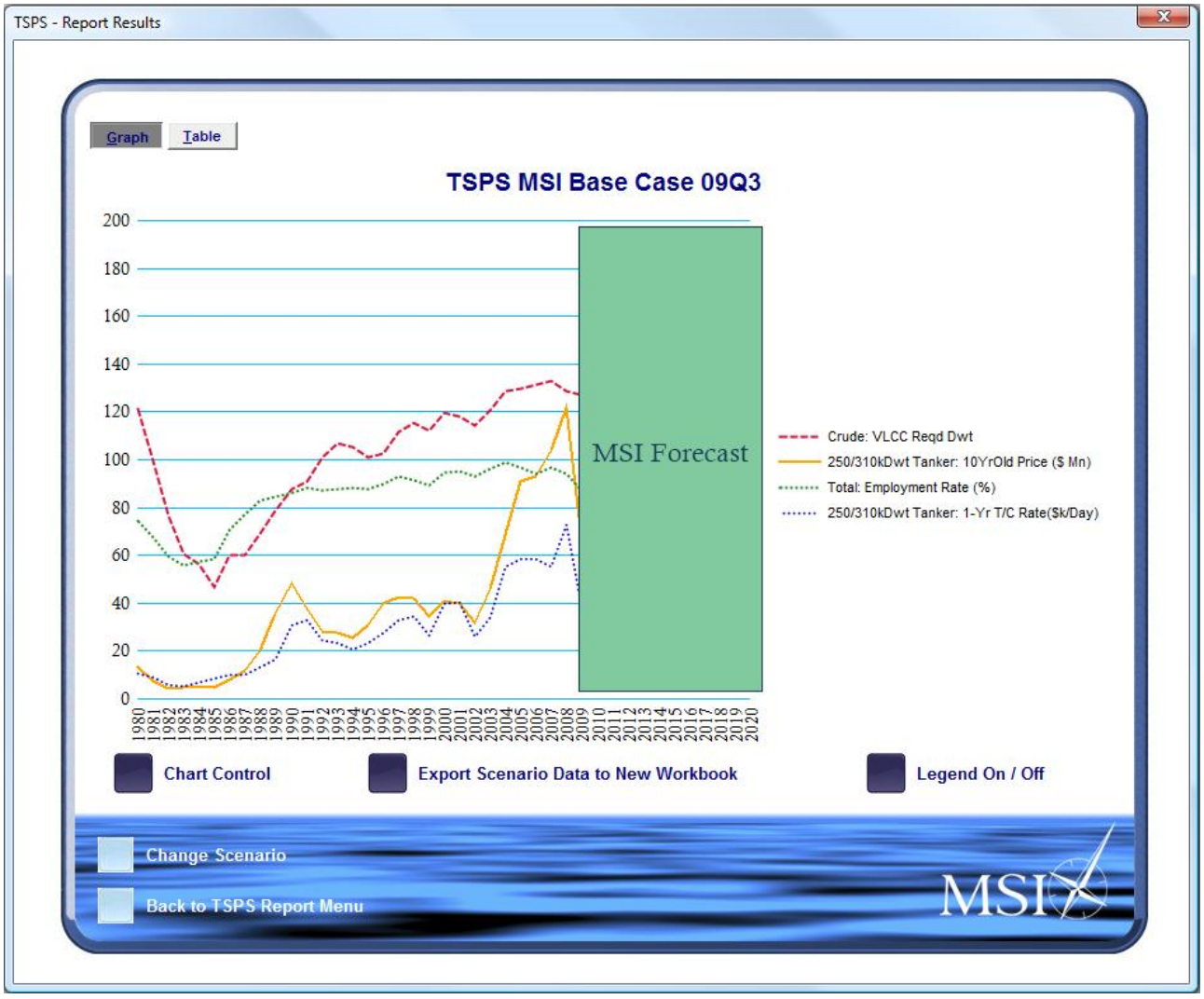


The TSPS model allows the user to modify and simulate alternative scenarios to the MSI Base Case. A wide selection of variables are available for modification by the user including GDP growth, commodity prices, regional refinery capacity, infrastructure constraints, fleet productivity, operating costs inputs and vessel supply responses.

Once an alternate simulation is complete this can be saved and then compared with either the MSI Base Case or another alternative scenario created by the user. Comparisons of variables can be made either graphically or in table format. The model also incorporates a step-simulation function allowing the user to view how a change in any given variable cascades through the layers of the model and ultimately affects market balances.

IV. Sample Screenshot

The user is able to compare the dynamics of different variables. The screenshot below shows this functionality for four variables used within the model to analyse the tanker market.



V. Vessel Valuation

Vessel Valuation is a tool which enables the user to assess the financial performance outlook for specific tanker vessels.

Users can input specific details such as the vessel's size, age, flag, acquisition cost, financing terms etc. and then use MSI's Base Case scenario (or a user-generated scenario) to forecast cash flows and key investment return ratios such as NPV and IRR.

The robustness of these results can be tested using statistical techniques such as Monte Carlo Simulation, as can their sensitivity to project assumptions such as:

- The timing of investment/disposal decisions
- Fixed versus spot employment
- The capital structure of the project

VI. Deliverables

A Tanker Shipping Planning Service package can include a combination of the following:

- Modelling software
- Quarterly Market Reports
- Reference Guide
- Equations Book
- Up to 2 days on-site training
- On-site market presentation.

Each quarterly model update is supported by a comprehensive written report containing extensive analysis and industry insights on the international economic environment, oil market trends, tanker fleet developments, market balances and forecast sensitivities. The report also provides reasoning behind our Base Case forecast as well as any changes made to it. Detailed data extracts from the TSPS are included in each report.

The Reference Guide provides detailed instructions on set up, installation and use of Tanker Shipping Planning Service software, a description of the forecast methodology and a complete listing of data sources.

TSPS is written on a Microsoft Excel® platform, and updates containing MSI's latest forecasts are distributed quarterly via an easily installable Microsoft Windows® installation package.