

A Premium Service Featuring Monthly Forecasts and Online Data “Portal”

FREIGHT MARKET OUTLOOK

Overview

The tanker sector has been in a cyclical downturn ever since the Great Recession caused a contraction in both oil demand and tonnage demand in 2008 and 2009. The decline in tonnage demand was accompanied by a boom in new tanker construction and deliveries, which was prompted in part by the need to replace single-hulled tonnage. For PIRA Freight Market Outlook (FMO) clients, the downturn was not a surprise as the excessive scale of the tanker order book and limited fleet rationalization measures had been highlighted as market threats since well before the economic downturn.

Further uncertainty looms ahead as the complexity of the freight markets will be compounded in the next several years by the economic and oil demand recovery, by still robust deliveries of tonnage ordered before the downturn despite delays and cancellations, and by the conversion of tankers to dry bulk and other services. Operational issues such as the increasing usage of tankers in floating storage service and the proliferation of Atlantic Basin movements to the Far East and other non-tributary oil flows add further uncertainty. Environmental considerations are also driving changes to the tanker trades. IMO-mandated changes in bunker fuel quality and potential restrictions on GHG emissions will also impact tanker operations and economics.

FMO, a premium service that features two in-depth monthly reports and an innovative online data “portal,” translates the key assumptions and oil flows in PIRA’s *World Oil Market Forecast* into an up-to-date oil transportation balance and freight rate forecasting tool. Tracking and projecting freight movements and rates allows FMO clients to anticipate changes in the availability and cost of tonnage for different vessel size classes and trades.

The FMO Portal provides unique on-line tools for retrieving and downloading historic and forecast tanker rates and chartering statistics. In addition to fast data retrieval, site allows flexible manipulation of the data at the individual user’s discretion. The portal also provides convenient access to the monthly *Freight Market Outlook* report and *Dry Bulk Freight Market Forecast*, as well as special reports.

The FMO Deliverables

1. The *Freight Market Outlook* monthly report.

Each FMO report contains:

- An overview of changes in the oil markets, especially those with a significant impact on transportation requirements.

PIRA ENERGY GROUP

September 23, 2011



GLOBAL OIL

Freight Market Outlook

Summary

Tanker markets have been in a deep slump as the prospects for oil demand growth, which is sorely needed to absorb the current overhang of surplus tonnage, continue to diminish. In some trades, rates are barely adequate to cover marginal voyage costs. Historically, the winter period has been the most profitable for the industry as inter-regional flows increase to meet the seasonal peak in oil demand. But the prospects for a seasonal rebound this year are decreasing as the economic environment worsens.

While still a net positive for tanker demand, oil market fundamentals continue to deteriorate along with the overall economic climate on concerns about the European banking and sovereign debt crises. While PIRA does not foresee a global recession, recent developments have caused us to substantially lower our economic growth projections and oil demand forecasts. PIRA’s projection for oil demand growth in 2011 was lowered to 0.9 MMB/D from 1.1 MMB/D. For 2012 oil demand growth is now estimated at 1.0 MMB/D, down from 1.5 MMB/D previously.

While crude futures have been volatile with the benchmark grades rising and falling with financial markets, the physical markets have been tight with commercial stocks at their lowest point since 2008. The futures structures for crude and products have moved into steep backwardation, reflecting a tightening in the physical trade. For tanker operators this has translated into relatively high spot bunker prices, which have added to the pressure on operating margins. That said, tighter industry inventories will promote higher liftings in the fourth quarter.

The large amount of new tonnage entering the market continues to be the main deterrent to any significant improvement in tanker rates. So far in 2011, 172 new vessels totaling 25.1 MMDWT have been added to the fleet, including 42 VLCCs, 28 Suezmax vessels and 37 Aframax vessels. But, given the dismal state of the market and financing constraints, delays and cancellations have been rising. About one third of vessels originally scheduled for delivery in 2011 have been deferred. Deferrals have the effect of smoothing out the year-to-year vessel delivery patterns.

VLCC rates have traded below WS 50 for a second straight month despite a recent seasonal pick-up in activity, with rates depressed by a more than ample supply of tonnage and a slowdown in Middle East offtake in September. The influx of new tonnage and weak rates in the Atlantic Basin have discouraged ballasting around Africa causing the queue of available VLCC tonnage in the Mideast to rise to the highest level this year.

The markets for the MST tanker groups have fared somewhat better. Suezmax rates have recovered, albeit from depressed levels, supported by high penetration in the key West African to U.S. Gulf trade.

- A summary of fleet capacity assumptions, including the impact of tanker construction, conversions, and demolition as well as changes in pipeline flows.
- A month-by-month supply-demand table for each class, summarizing historic and projected utilization rates.
- Commentary on recent trends and anticipated changes in the freight markets.
- Commentary on transportation issues of special interest, such as the debate on tanker fuel quality. The subject matter will change depending on market developments and client feedback.
- A freight outlook, with historic and forecast rates for indicative trades in each size class as follows:

VLCC: AG/East and AG/West
 Suezmax: West Africa to U.S.
 Aframax: North Sea to Continental Europe; Caribbean to USGC
 Panamax: Caribbean to USGC
 Product Tankers: Continental Europe to U.S.

2. The monthly Dry Bulk Freight Market Forecast report.

The Dry Bulk Freight Market Forecast analyzes the supply and demand fundamentals of coal, iron ore and steel freight markets. This monthly report, providing an up-to-date market review and forward outlook, is supplemented every third month by enhanced coverage, featuring additional data granularity, tables, and forecasts.

3. The Freight Market Outlook Portal

The Freight Market Outlook Portal provides interactive tools for an in-depth view of short- and long-term freight rate information. Data include PIRA's proprietary freight cost projections, including a breakdown of market rates (in Worldscale) and Flat Rate components. Near-term forecasts and history for these items are monthly, while long-term forecasts and history are annual averages. The portal provides the flexibility to download, graph and store transportation rates for key trades and size classes for years as far back as 1996 and as far forward as 2025.

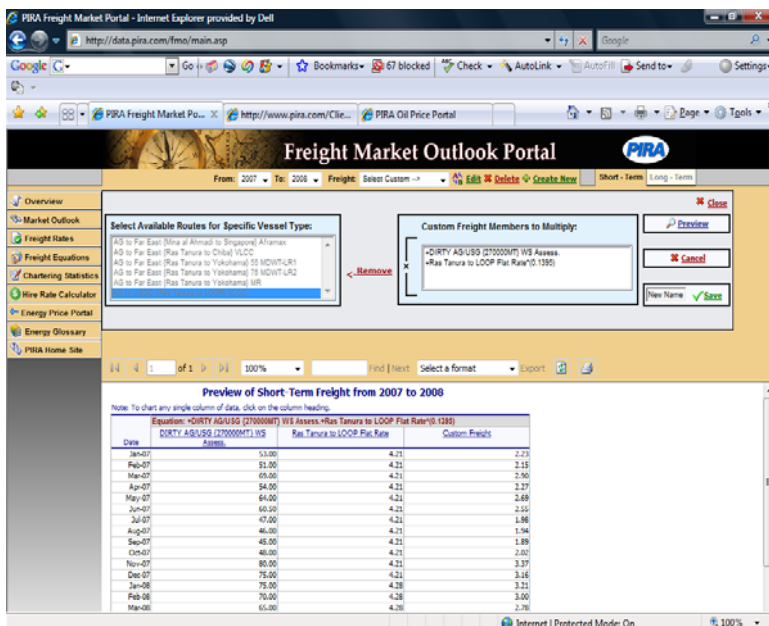
A key feature of Freight Market Outlook Portal is the ability to integrate transportation costs with data in PIRA's Energy Price Portal, making the Energy Price Portal that much more powerful. Now authorized users can incorporate transportation economics with global price forecast scenarios for advanced computation of crude and product netbacks. Only FMO clients have this capability.



FMO Portal Home Page

The FMO Portal utilizes its proprietary database of historic and projected oil movements, along with a customized transportation model to forecast freight rates for key trades and routes. **The FMO Portal currently covers the following 18 key crude and product trade worldwide routes:**

Routes	Load Port	Discharge Port	Vessel Sizes	Description
AG to Far East	Ras Tanura	Chiba	VLCC	Very large crude carrier
AG to USGC	Ras Tanura	LOOP	VLCC	Very large crude carrier
West Africa to USEC	Bonny	Philadelphia	Suezmax	Suezmax
West Africa to USGC	Bonny	LOOP	VLCC	Very large crude carrier
Caribbean to USG	PLC (Venezuela)	Corpus Christi	Aframax	Aframax
North Sea to North Europe	Sullom Voe	Wilhemshaven	Aframax	Aframax
North Sea to USEC	Sullom Voe	New York	Aframax	Aframax
Black Sea to Med	Novorossisk	Augusta (Italy)	Suezmax	Suezmax
North Africa to Med	Arzew (Algeria)	Lavera (France)	Suezmax	Suezmax
AG to Far East	Mina al Ahmadi	Singapore	Aframax	Aframax
Caribbean to USEC	PLC (Venezuela)	New York	Panamax	Panamax
North Europe to USGC	Antwerp	Houston	Panamax	Panamax
North Europe to USEC	Antwerp	New York	38 MDWT	Product tanker
Med to USEC	Lavera (France)	New York	38 MDWT	Product tanker
AG to Far East	Ras Tanura	Yokohama	MR	Product tanker
AG to Far East	Ras Tanura	Yokohama	55 MDWT-LR1	55 MDWT-LR1
AG to Far East	Ras Tanura	Yokohama	75 MDWT-LR2	75 MDWT-LR2
Caribbean to USEC	PLC (Venezuela)	New York	38 MDWT	Product tanker



A freight rate query result from the FMO Portal

In addition to freight rate forecasts, users will have the flexibility to access the FMO database of over 76,000 spot fixtures for worldwide trade routes, using customized searches or pre-designed reports. The Portal's chartering database allows users to search the data using user-defined search criteria for vessel size, clean or dirty trades, and load and discharge regions to extract, analyze and download spot chartering activity. Enhanced features have been recently added to allow for better and more flexible analysis. In additions improved graphic capabilities were added.

The FMO Portal also contains the Hire Rate Calculator, which converts historic and forecast **Worldscale rates to a term hire equivalent for key worldwide crude and product trade routes.** Term hire equivalent calculations are based on prevailing bunker prices and vessel performance characteristics.

Date	World Scale	Hire Rate (\$/Day)
Jan-96	61	26,650
Feb-96	72	34,385
Mar-96	71	33,921
Apr-96	53	22,211
May-96	54	23,693
Jun-96	71	34,613
Jul-96	75	37,232
Aug-96	73	35,416
Sep-96	60	26,045
Oct-96	60	25,932
Nov-96	64	28,232
Dec-96	62	27,322
Jan-97	66	33,029
Feb-97	63	31,783
Mar-97	66	33,789
Apr-97	57	28,074
May-97	65	33,196
Jun-97	75	39,535

The FMO Portal Hire Rate Calculator

The FMO Portal Benefits

Users of the FMO Portal benefit from:

- Up-to-date short-term (to 2012) and long-term (to 2025) freight forecast estimates, including historical data back to 1996.
- Ability to define, analyze and store custom freight routes using the Freight Equation Manager (up to 100 custom relationships composed of essentially an unlimited number of terms).
- Ability to integrate transportation costs and economics with data in PIRA's Oil Price Portal for advanced computation of crude and product netbacks.
- Ability to analyze spot chartering activity for key trade routes and examine trends with respect to both volumes and the mix of vessel sizes for designated routes.
- Advanced charting capabilities.
- Exporting utility into Excel, CSV, and PDF formats

Methodology Behind the Creation of FMO

FMO relies on detailed inter-regional crude and product flows prepared in conjunction with the monthly *World Oil Market Forecast*. Using these flows, we then overlay a transportation model that translates each individual trade flow into a corresponding tonnage requirement. For example, for crude exports from the Middle East to India, the model splits this stream into separate requirements for VLCC, Suezmax, and Aframax vessels. The calculation of transportation requirements also includes intra-regional flows of crude and products, such as the movement of North Sea crude within Europe and the distribution of Indonesian and Malaysian crudes within Southeast Asia.

Repeating this calculation for all crude and product trade flows allows us to compute the collective requirements for all vessels in a given size class. Requirements in each class are compared to an updated vessel count to determine the relative utilization rate. This metric allows us to quantify the supply-demand relationship at a given point in time, to explain historic rates, and to project rates. Seasonality and weather are also important and are thus factored in when assessing vessel requirements.

The various vessel size classes compete in certain trades (inter-class competition), so we use reported spot fixtures to test, and modify if necessary, our assumptions regarding the mix of vessel sizes in a given trade. The freight rate forecast also draws upon PIRA's database of tanker rates, transportation economics, freight futures, and our knowledge of arbitrage economics — all of which, in addition to the models calculations, help develop a story of what is happening in the freight markets.

The Freight Market Group

Kenneth M. Bogden (Director, Freight Markets) develops PIRA's monthly Freight Market Outlook and participates in special projects. Prior to joining PIRA in 2005, he worked for ExxonMobil for 27 years, primarily in its oil supply and trading and planning functions. He also served as Coordinator of Transportation Planning for Exxon International, where he acted as plans coordinator and advisor to senior management on oil transportation markets. Mr. Bogden has a B.S. in chemical engineering from Lafayette College and an M.B.A. from Columbia University.

Richard (Rick) Joswick (Managing Director, Global Oil) develops PIRA's outlook for crude and products pricing, refinery margins, and inter-regional supply balances. He authors PIRA's monthly *European Oil Market Forecast* and participates in special projects and multi-client studies. He joined PIRA in 2004 after a 20-year stint with ExxonMobil in supply logistics, planning, refining, and research roles. Rick has M.S. and B.S. degrees in chemical engineering from Rutgers University.

Alan Struth (Director) has over 20 years of energy industry experience focusing on financial and industry market analysis, economics, policy analysis, forecasting and planning. Mr. Struth is a member of the International Association of Energy Economists and National Association for Business Economics. He holds a B. A. in economics from Rice University and a Master of Science degree in energy management and policy analysis from the University of Pennsylvania.

Su Hyung Ryu, (Senior Analyst) maintains integrated oil demand and pricing models and information systems for PIRA. Since joining PIRA in 1998, she has participated in numerous benchmarking and competitive analysis projects, crude and product marketing assessments, and asset valuations. Prior to PIRA, she worked at Citibank Global Banking, where she analyzed and developed investment database applications. Su has a M.S. in business computer information systems from Baruch College.

ACCEPTANCE FORM

(Company Name) _____ wishes to become a client to PIRA’s **FREIGHT MARKET OUTLOOK** and understands and agrees that:

- The annual fee is \$12,500*.
- The annual fee for **clients to PIRA’s Global Oil Retainer** is \$9,000*.

The fee paid entitles the client company to have up to 10 unique users located at one site. Clients requiring usage beyond that profile should contact PIRA for licensing terms and pricing.

* Prices are applicable until December 31, 2012.

Company: _____

Name/Title of Primary Contact: _____

Address: _____

Phone/Fax: _____

E-mail: _____

Fee _____

Signature: _____

PLEASE MAIL, FAX, OR E-MAIL TO: PIRA Energy Group
 Attn.: Managing Director, Client Services
 3 Park Avenue, 26th Floor
 New York, NY 10016-5989
 Phone: 212-686-6808; Fax: 212-686-6628
sales@pira.com

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