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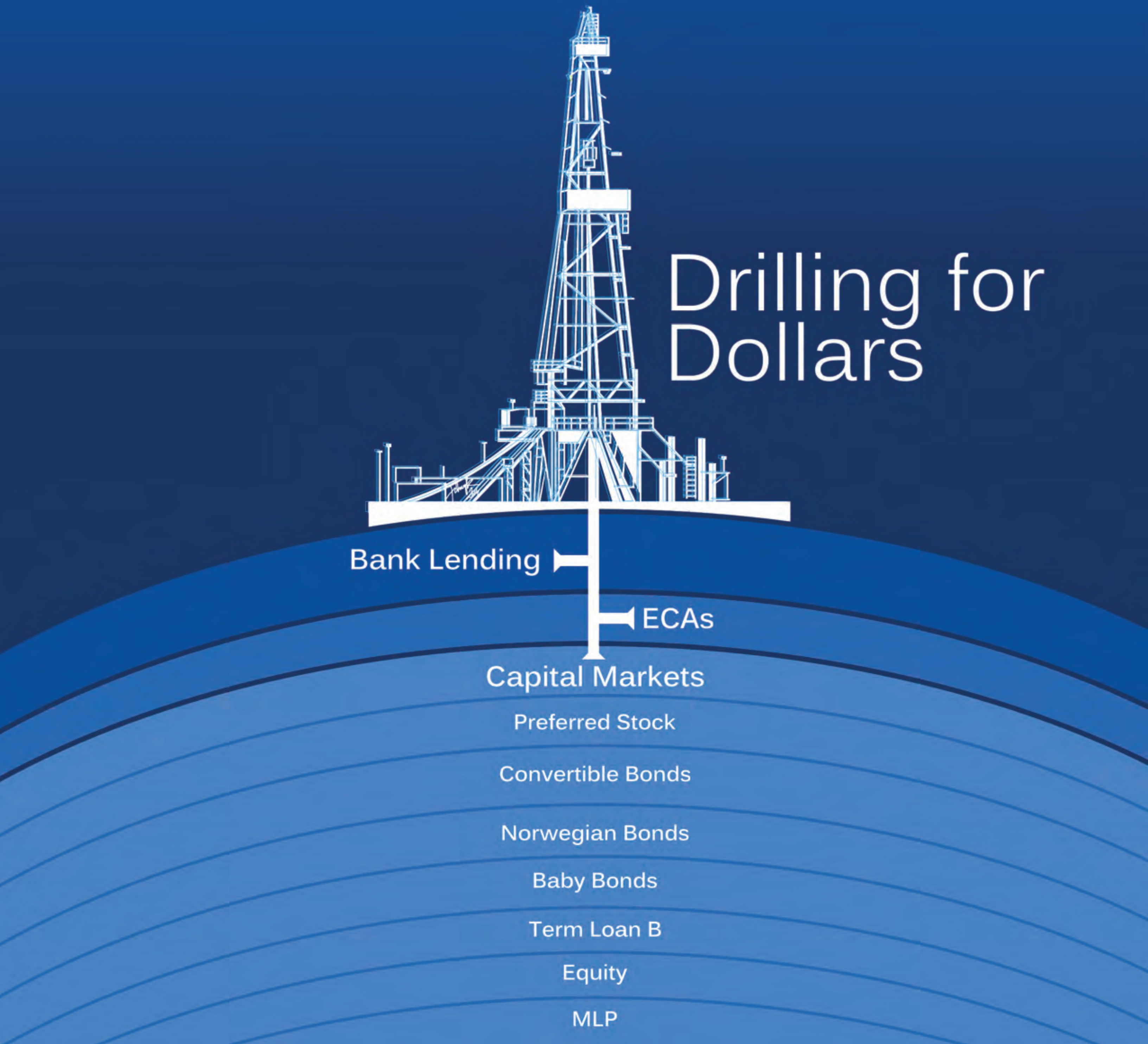
Drilling for Dollars



VALUATION METHODOLOGIES FOR INVESTMENTS IN THE MARITIME INDUSTRY

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BACKGROUND

With the increasing interest in maritime investments, especially from private equity investors, the need to understand and consistently estimate "fair value" has become more critical. Historically, bankers have provided debt financing for maritime assets based on entity specific, market, regulatory and other factors. What is less well understood is consistently determining fair value in the context of financial reporting. The concept of "fair value" has been much maligned through the recent financial crisis. Some believe it means fire sale pricing. Others believe fair value is only relevant for actively traded investments.

The purpose of this article is to focus on best practices for estimating fair value in the context of financial reporting. Fair value is defined as ***"…the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."***[1] Investors, especially private equity and other intuitional investors, must report their investments periodically (often quarterly) at fair value using this definition.

VALUATION METHODOLOGY

The shipping market is cyclical, seasonal, and susceptible to external shocks, which may lead to volatility in charter rates and asset values. The industry can be broadly classified into Crude Tankers, Product Tankers, Dry Bulk Carriers and Containerships (each a "Vessel" and collectively the "Vessels"). The dominant contract types used by shipping companies are spot charters and time charters.

Shipping assets generally fall into one of the following categories:

- A Vessel or collection of Vessels that is not expected to grow in size beyond a fixed investment amount or number of Vessels; or
- A business with continuing operations that is normally expected to operate a growing number of Vessels and is expected to operate indefinitely[2].

Fair value for shipping assets should be estimated using one or more of the following methods: (1) Income Approach, (2) Market Approach and/or (3) Underlying Assets Approach. The appropriateness and applicability of different methods depends on the length of the charter contracts of the Vessels

The table below illustrates typical approaches to estimation of Fair Value.

The discounted Cash Flow

	Income Approach	Market Approach	Asset Approach
Description	DCF		
Vessel or Collection of Vessels	2	-	1
Business with Continuing Operations			
With significant vessel growth expectations	1	2	-
With long term charters	1	2	1
With neither long term cgarters nor expected growth	2	-	1

(1) Primary valuation approach
(2) Secondary valuation approach

("DCF") method is the primary approach to valuing shipping assets with continuing operations. If the vessels are recently acquired, and the associated transactions are at arm's length and meet the definition of Fair Value under ASC 820, the Underlying Asset Approach is generally the primary approach and would be supplemented by the Income Approach.

INCOME APPROACH

Free Cash Flow to Equity ("FCFE") versus Free Cash Flow to Firm ("FCFF")

If debt is attributable to each Vessel individually, it is appropriate to estimate FCFE. Equity value is estimated for the business as a whole, and free cash flow to equity is the sum of cash flows across all vessels after subtracting interest expense for each vessel. Alternatively, if debt is held at the company level, it is preferable to estimate FCFF.

Cash flow projections should be developed based on either of the following:

- Assuming operations through the end of the useful life of the ships; or
- Assuming operations until an expected end of the charter or assumed sale of the Vessel/business, plus adding an estimation of an expected sale price for vessels at the end of the charter or holding period.

Cash flows sometimes assume a run-off of the business based on the current set of contracts and ships. Sensitivity analysis based on scenarios that assume the renewal of existing charters and/or the purchase of additional ships should also be considered.

A terminal value at the end of the projection period may reflect:

- Estimated proceeds from the sale of Vessels[3];
- Value from replacement of Vessels and terminal growth rate in perpetuity; and
- An exit multiple based on a sale to a willing buyer.

Key points to note while developing cash flow projections:

Historically, bankers have provided debt financing for maritime assets based on entity specific, market, regulatory and other factors.

- Charter rate assumptions should be based on current charters until expiration;
- Assumed renewal rates should look at current market data for comparable Vessels;
- If the Vessel is being deployed in the spot market, the revenue projections should be based on the forward spot market rate[4];
- The number of off-hire days should be considered for each Vessel; and
- The expenses should be calculated incorporating repairs, dry dock, overhead and other operating expenses.

Additionally, the discount rate to be applied to the cash flows should be developed based on current market assessment of the risks specific to the business.

MARKET APPROACH

Guideline Company Method

The key multiples to consider when using the market approach are the following:

- Market Value of Equity to Book Value of Equity;
- Total Enterprise Value to Revenue; and
- Total Enterprise Value to EBITDA.

Selection of comparable companies and concluded multiples depends on the of types of Vessels, typical charters, size of subject company, historical and expected growth, and the ability to raise capital in order to execute future growth and commitments. The above metrics can be applied on LTM and forward basis, and forward multiples may be preferable where the subject company is in a growth phase.

The operational differences among tankers, dry-bulk and container carriers should guide the application of the market approach. Given the cyclical behavior of the shipping industry, it is useful to consider forward multiples, sometimes for multiple periods, to try to capture normalized performance. Moreover, if the subject company has multiple types of Vessels, the comparable firms should be analyzed by category.

Comparable Transaction Method

Applicable recent transactions of comparable companies should be reviewed to compute the key metrics mentioned under the Guideline Company Method.

NET ASSET APPROACH

Fair Value can be estimated using a net asset approach based on published transaction prices[5,6]. Vessels can be sold with or without charters, and it is important to separate the charter value whenever possible.

Estimation of the value of long-term charters is challenging, as it is difficult to obtain prevailing rates for longer term charters. This often requires data from company management reflecting current negotiations and market observations.

In periods with no comparable Vessel transactions as benchmarks, it becomes necessary to use a cost-based value that reflects estimated price movements based on market data

COST-BASED VALUES

Another approach to estimate Fair Value is based on acquisition costs plus a delta to reflect market movements[4] since acquisition. Acquisition costs are adjusted for brokerage commissions.

If the Vessel was purchased unchartered, the value of the current charter in excess of prevailing charter market rates should be added or subtracted.

If the Vessel was purchased chartered, the value of the original charter in excess of charter market rates, as defined above, should be subtracted/added and then, in a second step, the value of the current charter in excess of market rates, if any, as defined above, would be subtracted/added to capture the true value.

Additionally, the Fair Value assessment would need to be adjusted for excess cash and other assets, parent company debt, and other working capital and liabilities held by the company.

Value increases and decreases as markets move and the overall economy progresses. Estimating fair value is nothing more or less than using judgment to express the price at which an investment would be sold in an orderly transaction at each valuation date.

SCRAP VALUES

Finally, the net assets approach should also consider scrap values as a floor in the estimation of Fair Value.

CONCLUSION

With increased interest in the maritime industry from institutional and private equity investors, the need to estimate fair value compliant with accounting standards at regular intervals becomes critically important. Value increases and decreases as markets move and the overall economy progresses. Estimating fair value is nothing more or less than using judgment to express the price at which an investment would be sold in an orderly transaction at each valuation date.

About the Authors

Dr. Stephan Forstmann *is a managing director in the New York office of Duff & Phelps and is part of the Alternative Asset Advisory practice. He has more than 20 years of financial experience focused on the valuation of illiquid securities of private equity and hedge funds, as well as funds of funds investors. In addition, Stephan has experience in broad mergers and acquisitions, lead advisory consulting, principal investing, and trading.*

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About Duff & Phelps

As a leading global financial advisory and investment banking firm, Duff & Phelps balances analytical skills, deep market insight and independence to help clients make sound decisions. The firm provides expertise in the areas of valuation, transactions, financial restructuring, alternative assets, disputes and taxation, with more than 1,000 employees serving clients from offices in North America, Europe and Asia. Investment banking services in the United States are provided by Duff & Phelps Securities, LLC; Pagemill Partners; and GCP Securities, LLC. Member FINRA/SIPC. M&A advisory services in the United Kingdom and Germany are provided by Duff & Phelps Securities Ltd. Duff & Phelps Securities Ltd. is authorized and regulated by the Financial Conduct Authority. For more information, visit www.duffandphelps.com.

1 US Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC 820) and International Financial Reporting Standard (IFRS) 13.
2 Some businesses operate as 'management companies' and lease and operate Vessel(s) instead of owning them. In such cases, the value of the Vessels themselves is not a part of the business enterprise value and, as such, care should be taken when projecting cash flows and selecting comparable companies.
3 Available from Clarksons or Marsoft.
4 Guidance on forward pricing can be obtained from the Baltic Exchange (www.balticexchange.com)
5 Clarksons provides ship broking, research activities and market movement data for the maritime sector.
6 VesselsValue.com is an online service providing market values for tankers, bulkers and containerships.